2 Elementary Mathematics

Two by Two

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Elementary Mathematics 2

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HARCOURT, BRACE & WORLD, INC.
New York Chicago Atlanta Dallas Burlingame

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Printed in the United States of America

TO THE TEACHER

Essential to the use of this grade 2 textbook, *Two by Two,* of the ELEMENTARY MATHEMATICS series is its accompanying Teacher's Edition. The Teacher's Edition gives the objectives and the detailed directions for teaching each page of the pupil's book. It includes many specific suggestions for employing a variety of learning activities and materials of proven value in carrying out a well-rounded mathematics program in the second grade. Anyone examining the textbook with a view to using it with children should refer to the Teacher's Edition. The Teacher's Edition is supplied free upon request to teachers using the textbooks.

This book, used in accordance with the Teacher's Edition, provides a continuity of activities and experiences necessary for learning the basic number concepts. As in the first-grade book of the series, the learning proceeds from sets and pictures of sets to the corresponding numerals, then on to operations with numbers. Throughout the book, learning activities are directed toward these two objectives:

1. To develop understanding of number meanings and relationships.
2. To develop mastery of basic facts and skills.

Meaningful teaching of elementary mathematics employs a variety of sensory experiences: seeing, touching, talking, and hearing are all essential. The pages of this textbook are intended to summarize and point up for the child the previous discoveries he has made by separating and putting together sets of objects, by pairing the sets (one-to-one correspondence), and through other experiences. The class should use each page as a basis for a discussion under the teacher's guidance before the children finally record the answers. Thus do number concepts grow and become meaningful through repeated practice with sets, pictures of sets, numerals, and other mathematical symbols.

The following is an outline of the mathematical content of grade 2 of ELEMENTARY MATHEMATICS. A complete analysis by pages will be found in the Teacher's Edition.

Sets
One-to-one correspondence (comparing sets)
Counting
Associating sets with corresponding numerals
Understanding numbers, reading and writing numerals through 10; through 1000

Understanding, comparing, and relating numbers 0 through 18
Number sequence
Equalities and inequalities
Geometry
Concept of one half and of doubles through 18
Concepts of one third and one fourth
Ordinals through tenth
Needed vocabularies, both spoken and written
Money (penny, nickel, dime, quarter, half dollar, dollar)
Measuring length to the nearest inch, half inch, and foot
Measuring liquid in cups, pints, quarts, and gallons
Measuring weight in pounds
Temperature
Time (clock and calendar)
Addition and subtraction with sums through 18; tens; tens and ones; hundreds; hundreds, tens, and ones
Multiplication and informal division
Problem solving
Estimating, generalizing, and reasoning

The reading load in this book is kept at a minimum. All the nonquantitative words are those the pupil is meeting in his reading textbooks and other classroom reading experiences. The mathematical terms are given meaning during the pre-book teaching and discussion periods, when the pupil hears, understands, speaks, and finally learns to recognize the written form. Thus the pupil is fully prepared to read easily the limited vocabulary used in this book.

Cover painting by Don Madden

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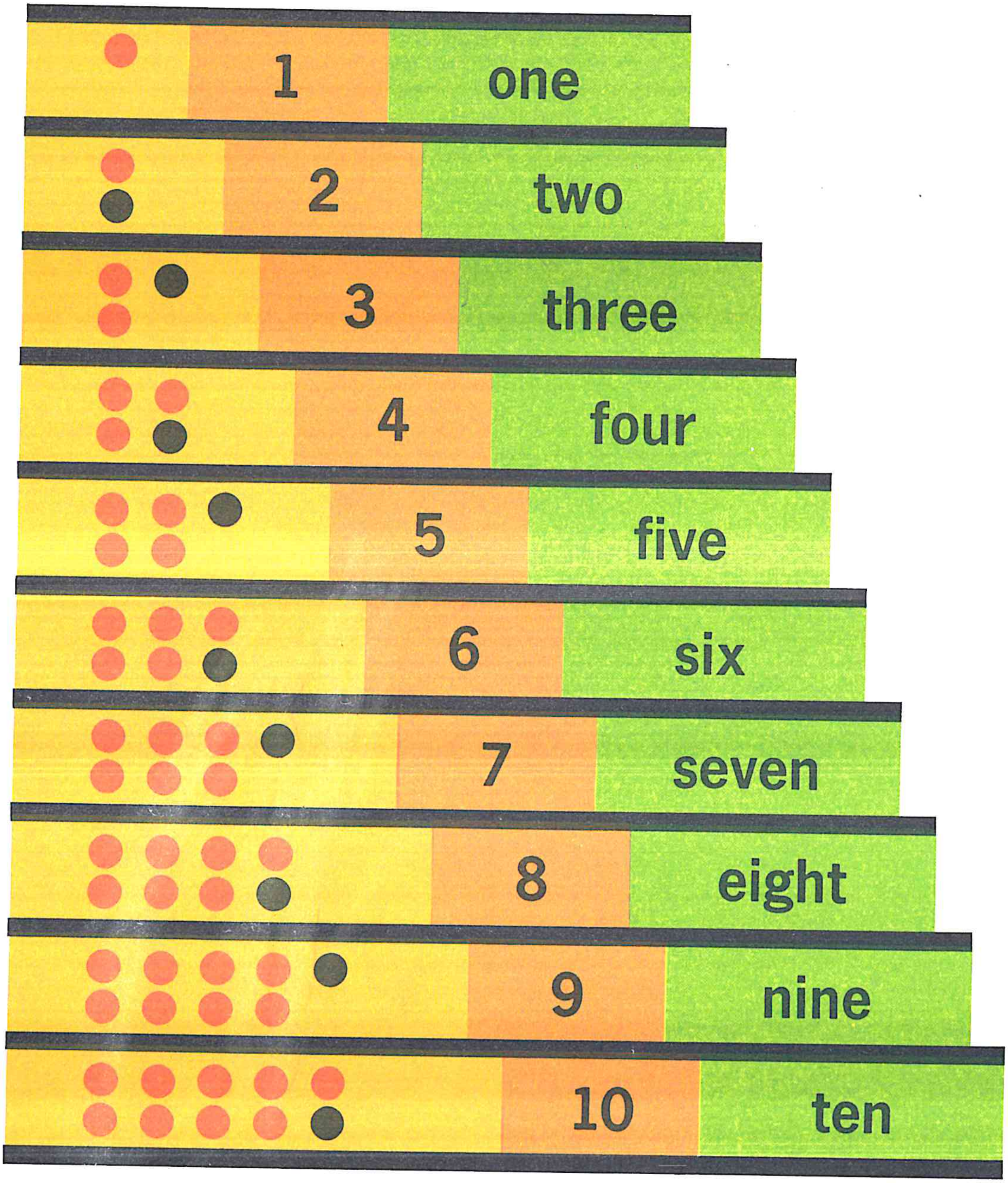
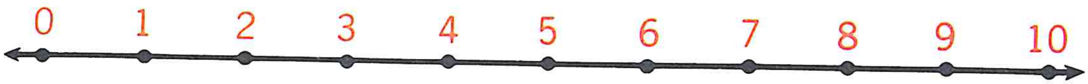
Elementary Mathematics

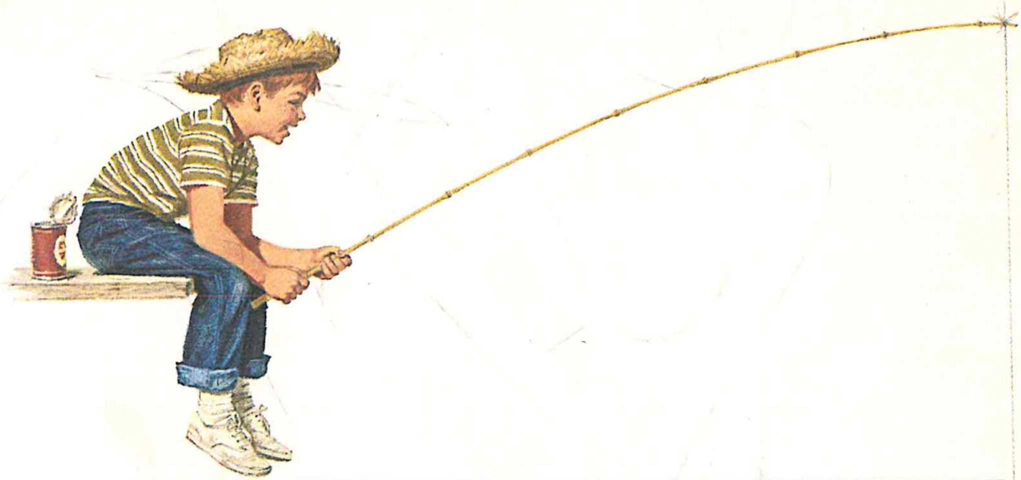
A counting chart and a number line

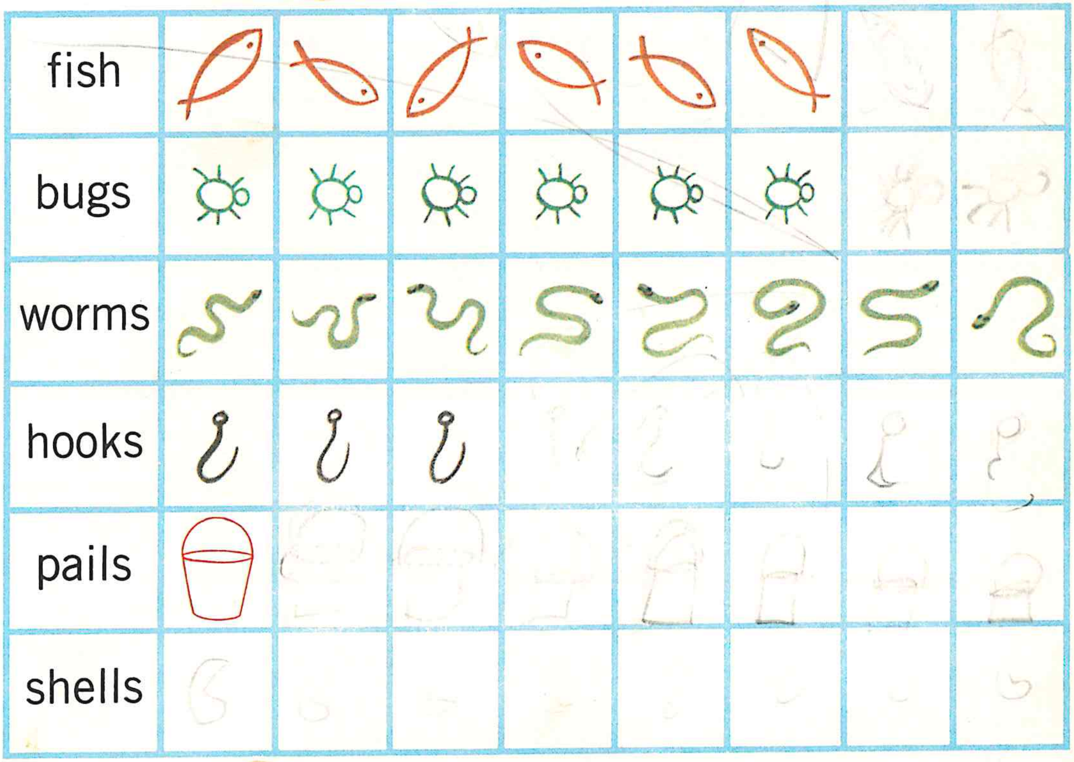


●	1	one
●●	2	two
●●●	3	three
●●●●	4	four
●●●●●	5	five
●●●●●●	6	six
●●●●●●●	7	seven
●●●●●●●●	8	eight
●●●●●●●●●	9	nine
●●●●●●●●●●	10	ten



Pairing members of sets

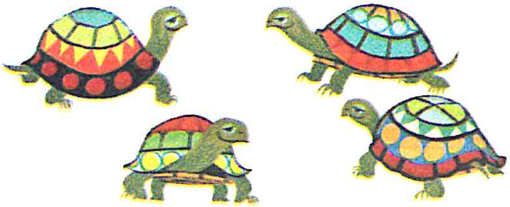




Using the numerals 0 through 9

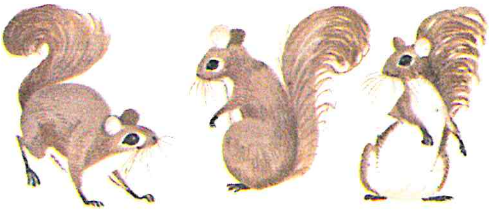
How many in each set?

Set A



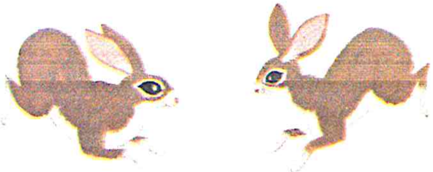
1 3 4 2

Set B



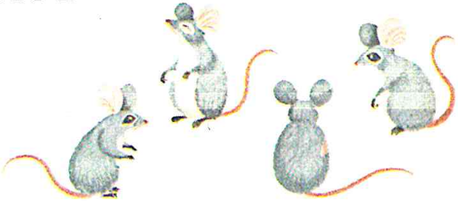
1 0 2 3

Set C



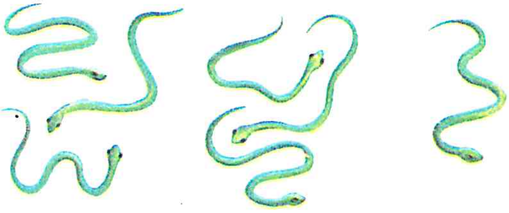
1 2 0 3

Set D



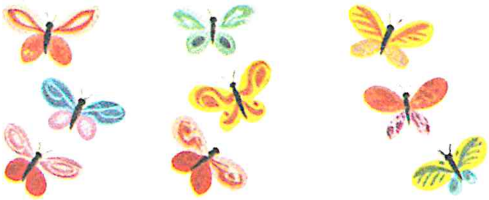
2 3 0 4

Set E



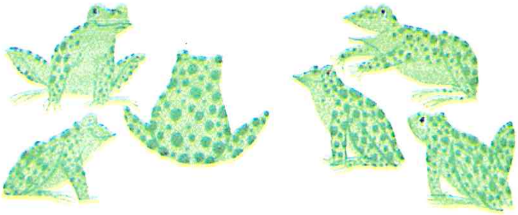
5 6 7 8

Set F



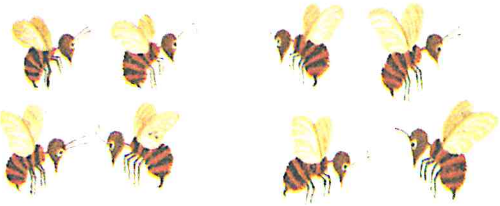
7 8 5 9

Set G



9 6 7 8

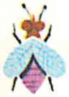
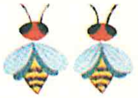
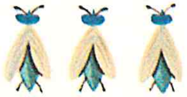
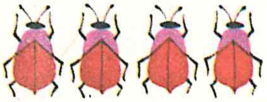
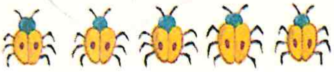
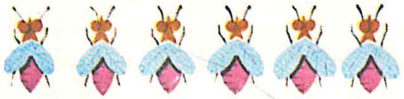
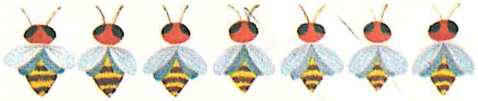
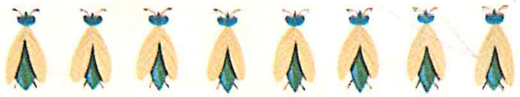
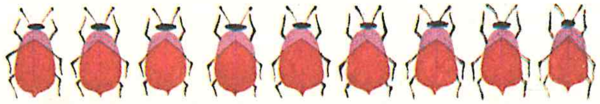
Set H



6 8 9 5

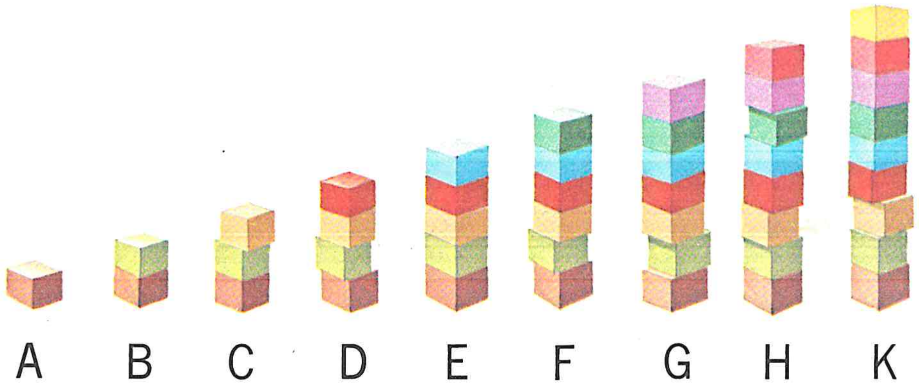
Writing the numerals 0 through 9

How many in each set?

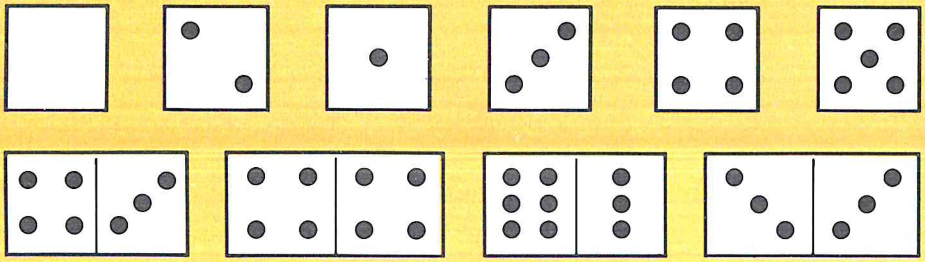
Set A		0
Set B		1
Set C		2
Set D		3
Set E		4
Set F		5
Set G		6
Set H		7
Set X		8
Set Y		9

Counting and writing the numeral

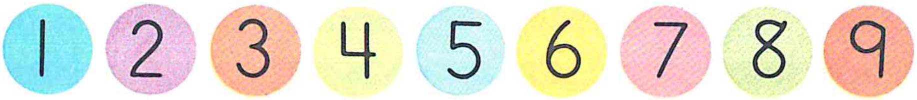
1. How many blocks in each set?



2. How many dots on each card?



3. How many balls in all?



4. Count backward.

9 8 ? ? 5 ? ? ? ? 0

Reading names for numbers

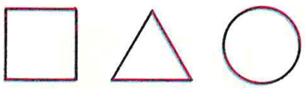
	0	zero	●	1	one
●●	2	two	●●●	3	three
●●●●	4	four	●●●●●	5	five
●●●●●●	6	six	●●●●●●●	7	seven
●●●●●●●●	8	eight	●●●●●●●●●	9	nine

1. Write the numerals for:

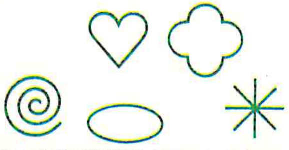
two	five	six	eight	zero
nine	seven	four	three	one

2. How many in each set? Write the word.

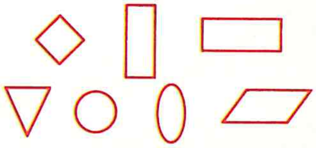
Set A



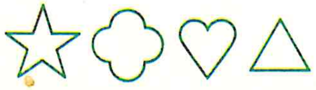
Set B



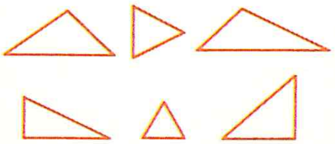
Set C



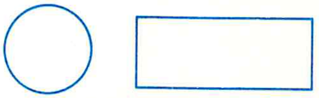
Set D



Set E

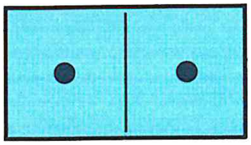


Set F



Adding 1 to a number

1.



1 dot 1 dot

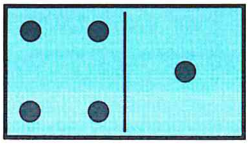
_?_ dots in all

Add: 1 and 1

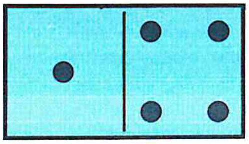
Say: 1 plus 1 equals 2

Write: $1 + 1 = 2$

2.

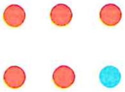


$4 + 1 = \square$



$1 + 4 = \square$

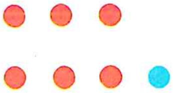
3.



$5 + 1 = \square$

$1 + 5 = \square$

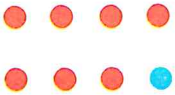
4.



$6 + 1 = \square$

$1 + 6 = \square$

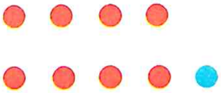
5.



$7 + 1 = \square$

$1 + 7 = \square$

6.



$8 + 1 = \square$

$1 + 8 = \square$

7.

$2 + 1 = \square$

$1 + 7 = \square$

$1 + 4 = \square$

$8 + 1 = \square$

8.

$1 + 5 = \square$

$6 + 1 = \square$

$3 + 1 = \square$

$1 + 6 = \square$

9.

$\square = 7 + 1$

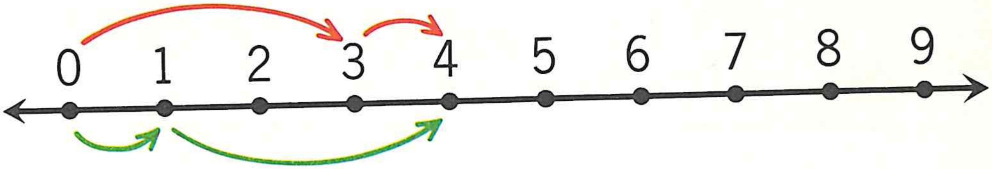
$\square = 5 + 1$

$\square = 1 + 8$

$\square = 4 + 1$

Using a number line to add

1.

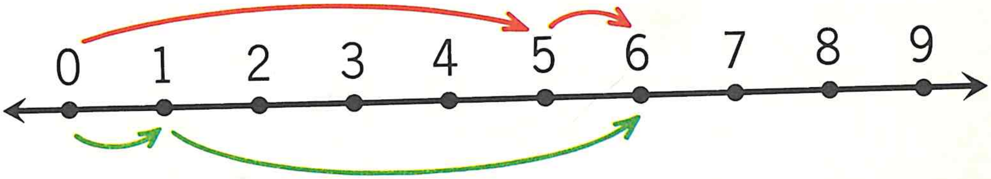


The red arrows show that 3 + 1 = ■

The green arrows show that 1 + 3 = ■

What do the arrows show?

2.



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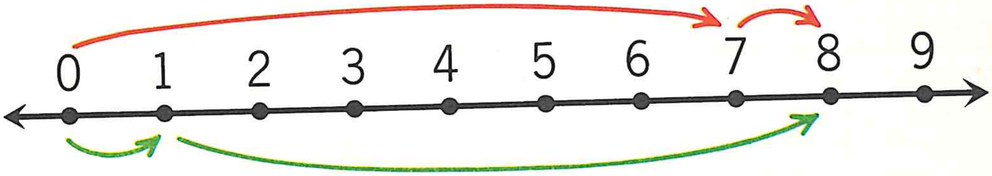

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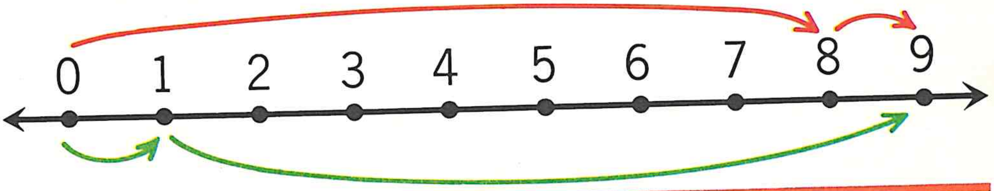

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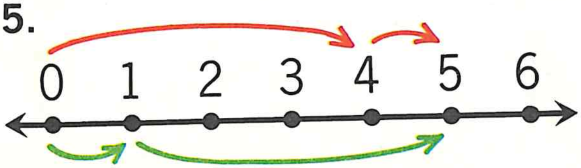

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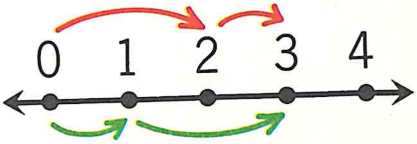


Subtracting 1 from a number

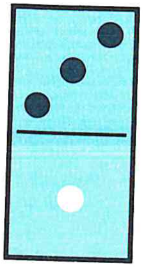
How many? Cover 1 dog.

How many are left? Subtract 1 from 3.

Say: 3 minus 1 equals 2

Write: 3 − 1 = 2

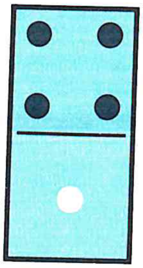
1.



4 − 1 = □

4 − 3 = □

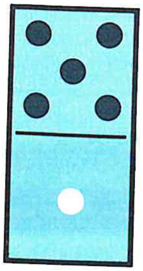
2.



5 − 1 = □

5 − 4 = □

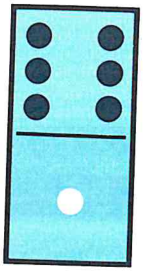
3.



6 − 1 = □

6 − 5 = □

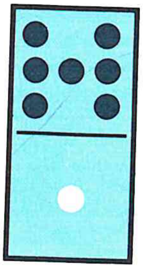
4.



7 − 1 = □

7 − 6 = □

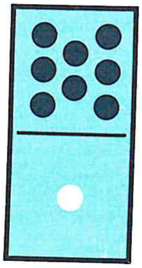
5.



8 − 1 = □

8 − 7 = □

6.

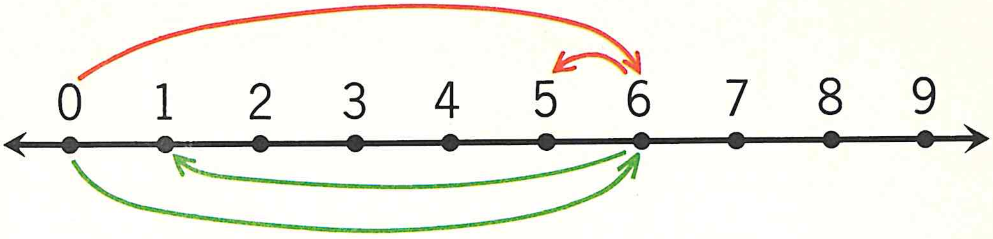


9 − 1 = □

9 − 8 = □

Using a number line to subtract

1.

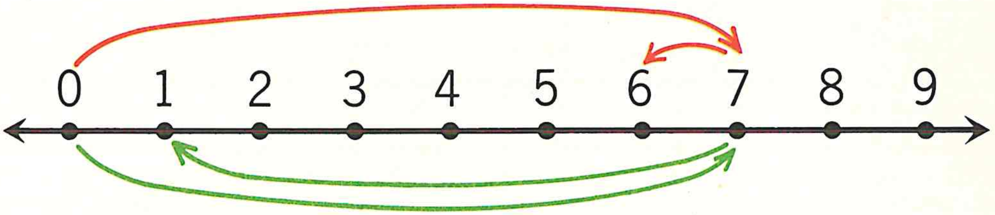


The red arrows show that 6 − 1 = ■

The green arrows show that 6 − 5 = ■

What do the arrows show?

2.



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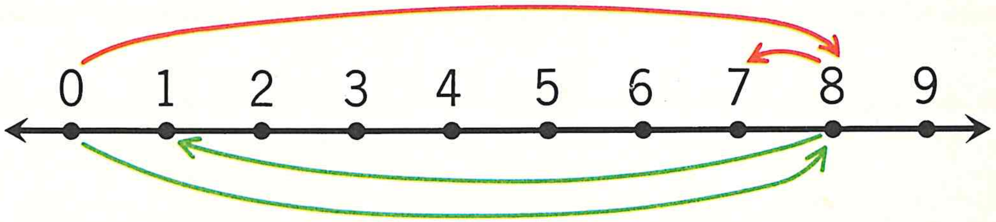

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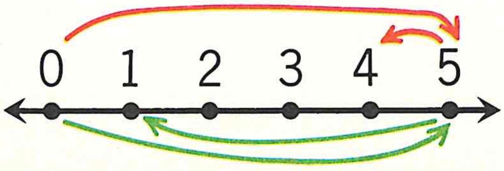

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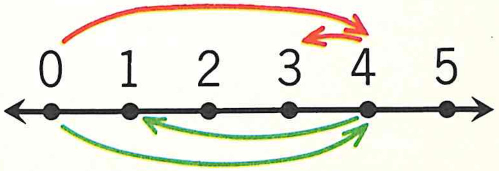
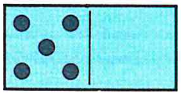


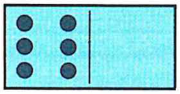
Zero in addition and subtraction

1.



5 + 0 = □
0 + 5 = □

2.



6 + 0 = □
0 + 6 = □

3.

4 + 0 = □
0 + 2 = □
0 + 0 = □

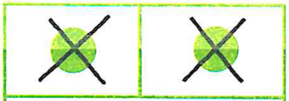
4.

3 + 0 = □
8 + 0 = □
0 + 1 = □

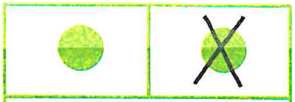
5.

9 + 0 = □
0 + 8 = □
7 + 0 = □

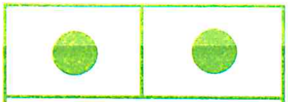
6.



2 − 2 = □



2 − 1 = □



2 − 0 = □

7.

3 − 3 = □
3 − 2 = □
3 − 1 = □
3 − 0 = □

8.

4 − 4 = □
4 − 3 = □
4 − 2 = □
4 − 1 = □
4 − 0 = □

9.

5 − 5 = □
5 − 4 = □
5 − 3 = □
5 − 2 = □
5 − 1 = □
5 − 0 = □

10. Use + or − to make each sentence

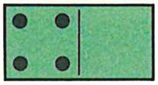
6 ● 0 = 6
9 ● 0 = 9

7 ● 7 = 0
6 ● 6 = 0

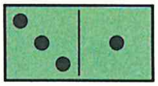
0 ● 8 = 8
0 ● 9 = 9

Sums of 4, 5, and 6

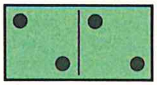
1.



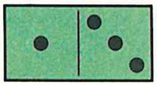
4 + □ = 4



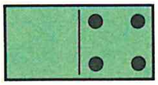
3 + □ = 4



2 + □ = 4



1 + □ = 4

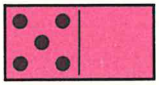


0 + □ = 4

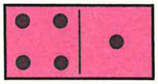
△ + □ = 4

△	□
4	0
3	1
2	?
?	?
?	?

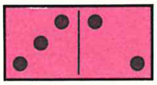
2.



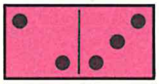
5 + □ = 5



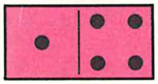
4 + □ = 5



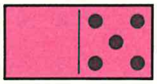
3 + □ = 5



2 + □ = 5



1 + □ = 5

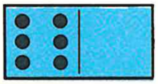


0 + □ = 5

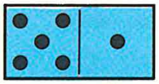
△ + □ = 5

△	□
5	0
4	?
?	?
?	?
?	?
?	?

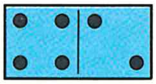
3.



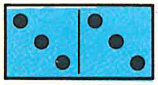
6 + □ = 6



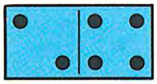
5 + □ = 6



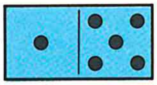
4 + □ = 6



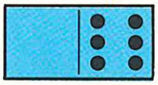
3 + □ = 6



2 + □ = 6



1 + □ = 6



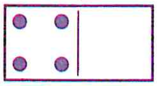
0 + □ = 6

△ + □ = 6

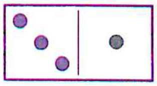
△	□
6	0
?	?
?	?
?	?
?	?
?	?
?	?

Subtracting from 4, 5, and 6

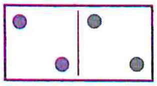
1.



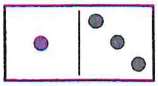
4 − ■ = 4



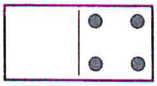
4 − ■ = 3



4 − ■ = 2



4 − ■ = 1

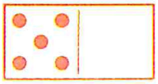


4 − ■ = 0

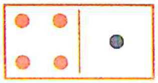
4 − △ = □

△	□
0	4
1	3
2	?
?	?
?	?

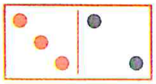
2.



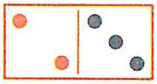
5 − ■ = 5



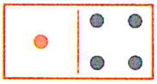
5 − ■ = 4



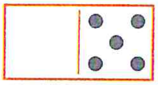
5 − ■ = 3



5 − ■ = 2



5 − ■ = 1

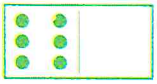


5 − ■ = 0

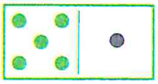
5 − △ = □

△	□
0	5
1	?
?	?
?	?
?	?
?	?

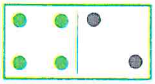
3.



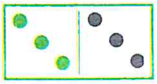
6 − ■ = 6



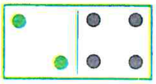
6 − ■ = 5



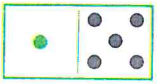
6 − ■ = 4



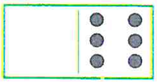
6 − ■ = 3



6 − ■ = 2



6 − ■ = 1

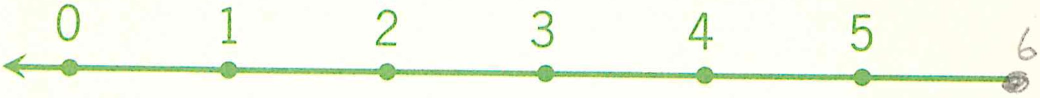


6 − ■ = 0

6 − △ = □

△	□
0	6
1	?
?	?
?	?
?	?
?	?
?	?

Counting on a number line



Move from:

1. 0 to 3. Move ahead 2 steps to ?. 3 + 2 = ☐
2. 0 to 5. Move back 2 steps to ?. 5 − 2 = ☐

3. 0 to 2. Move ahead 3 steps to ?. 2 + 3 = ☐
4. 0 to 5. Move back 3 steps to ?. 5 − 3 = ☐

5. 0 to 4. Move ahead 2 steps to ?. 4 + 2 = ☐
6. 0 to 6. Move back 2 steps to ?. 6 − 2 = ☐

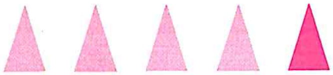
7. 0 to 2. Move ahead 4 steps to ?. 2 + 4 = ☐
8. 0 to 6. Move back 4 steps to ?. 6 − 4 = ☐

9. 0 to 4. Move ahead 0 steps to ?. 4 + 0 = ☐
10. 0 to 4. Move back 0 steps to ?. 4 − 0 = ☐

11. 0 to 5. Move ahead 0 steps to ?. 5 + 0 = ☐
12. 0 to 5. Move back 0 steps to ?. 5 − 0 = ☐

Studying number sentence families

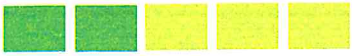
1.



4 + 1 = ■ 1 + 4 = ■

5 − 1 = ■ 5 − 4 = ■

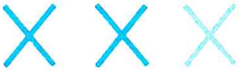
2.



2 + 3 = ■ 3 + 2 = ■

5 − 3 = ■ 5 − 2 = ■

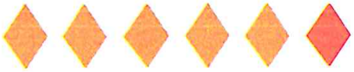
3.



2 + 1 = ■ 1 + 2 = ■

3 − 1 = ■ 3 − 2 = ■

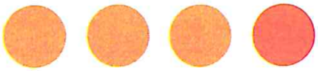
4.



5 + 1 = ■ 1 + 5 = ■

6 − 1 = ■ 6 − 5 = ■

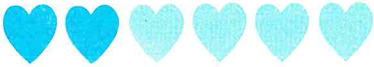
5.



3 + 1 = ■ 1 + 3 = ■

4 − 1 = ■ 4 − 3 = ■

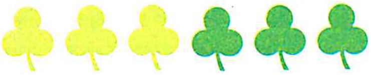
6.



2 + 4 = ■ 4 + 2 = ■

6 − 4 = ■ 6 − 2 = ■

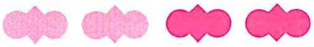
7.



3 + 3 = ■

6 − 3 = ■

8.



2 + 2 = ■

4 − 2 = ■

Making number sentences true

What number will make each sentence true?

1. $4 + \square = 6$ $3 + \square = 6$ $2 + \square = 6$
2. $\triangle + 1 = 5$ $\triangle + 2 = 5$ $\triangle + 3 = 5$
3. $\square = 5 + 1$ $\square = 4 + 1$ $\square = 3 + 1$
4. $6 = \triangle + 4$ $4 = \triangle + 2$ $2 = \triangle + 0$
5. $\square + 1 = 2$ $\square + 1 = 3$ $\square + 1 = 4$
6. $1 + \triangle = 1$ $\triangle + 6 = 6$ $\triangle = 3 + 0$

What number will make each sentence true?

1. $\square = 6 - 2$ $\square = 6 - 3$ $\square = 6 - 4$
2. $5 - \triangle = 4$ $5 - \triangle = 3$ $5 - \triangle = 2$
3. $\square - 5 = 1$ $\square - 4 = 1$ $\square - 3 = 1$
4. $4 = \triangle - 2$ $2 = \triangle - 2$ $0 = \triangle - 2$
5. $2 - \square = 1$ $3 - \square = 1$ $4 - \square = 1$
6. $\triangle - 1 = 0$ $\triangle - 5 = 0$ $\triangle - 4 = 0$

Studying equalities and inequalities

$=$	$6 = 6$	6 is equal to 6.
$>$	$6 > 5$	6 is greater than 5.
$<$	$6 < 7$	6 is less than 7.

Which sign will make each sentence true?

1.

$4 = 4$	$9 > 7$	$7 < 8$
4 ● 5	5 ● five	9 ● 6

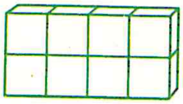
2.

$3 + 2 = 5$	$3 + 2 < 6$	$3 + 2 > 4$
$5 + 1$ ● 4	$5 + 1$ ● 8	$5 + 1$ ● 6
$3 + 3$ ● 8	$3 + 3$ ● 6	$3 + 3$ ● 5
$2 + 4$ ● 4	$2 + 4$ ● 9	$2 + 4$ ● 6

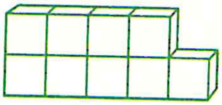
3.

$5 - 3 < 4$	$5 - 5 = 0$	$6 - 2 > 3$
$6 - 4$ ● 2	$4 - 2$ ● 1	$4 - 4$ ● 0
$5 - 0$ ● 6	$6 - 5$ ● 3	$5 - 2$ ● 6
$4 - 1$ ● 2	$6 - 0$ ● 6	$6 - 6$ ● 5

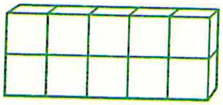
Studying sets with ten members



eight blocks

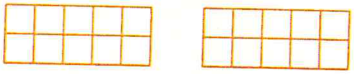


nine blocks



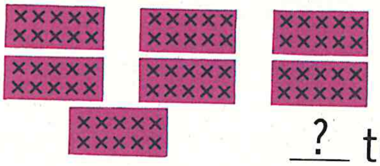
ten blocks

1.



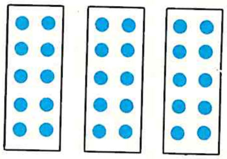
? tens

2.



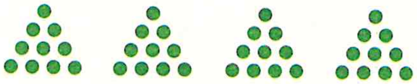
? tens

3.



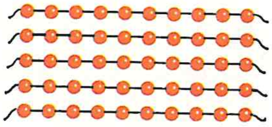
? tens

4.



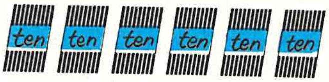
? tens

5.



? tens

6.



? tens

Use > or < to make each sentence true.

7.

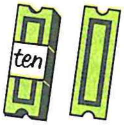
3 < 4	5 ● 2	6 ● 8
3 tens < 4 tens	5 tens ● 2 tens	6 tens ● 8 tens

8.

9 ● 5	4 ● 7	1 ● 3
9 tens ● 5 tens	4 tens ● 7 tens	1 ten ● 3 tens

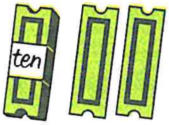
Studying tens and ones

1.



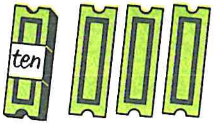
1 ten 1 one 11

2.



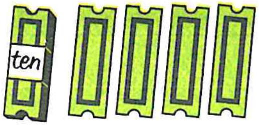
1 ten 2 ones ☐

3.



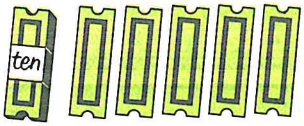
1 ten 3 ones ☐

4.



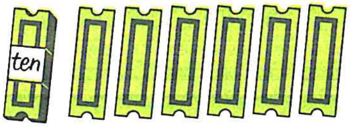
1 ten 4 ones ☐

5.



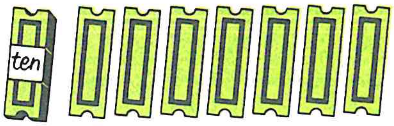
1 ten 5 ones ☐

6.



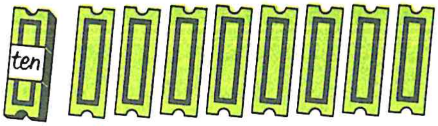
1 ten 6 ones ☐

7.



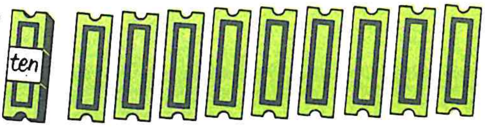
1 ten 7 ones ☐

8.



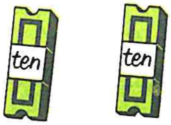
1 ten 8 ones ☐

9.



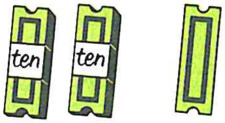
1 ten 9 ones ☐

10.



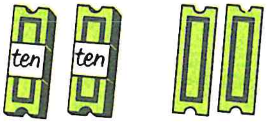
2 tens 0 ones ☐

11.



2 tens 1 one ☐

12.



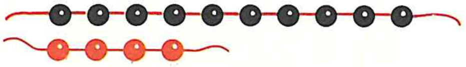
2 tens 2 ones ☐

Studying tens and ones

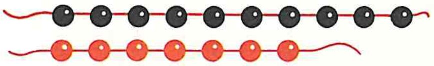
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

How many beads?

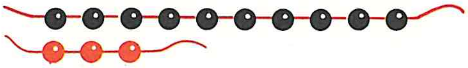
1.



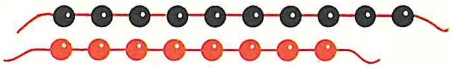
2.



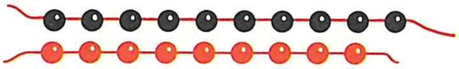
3.



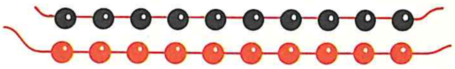
4.



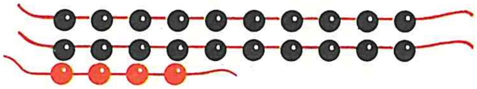
5.



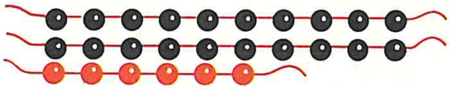
6.



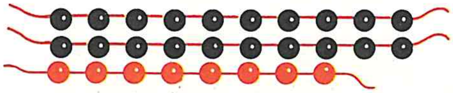
7.



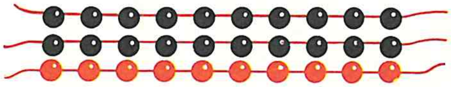
8.



9.



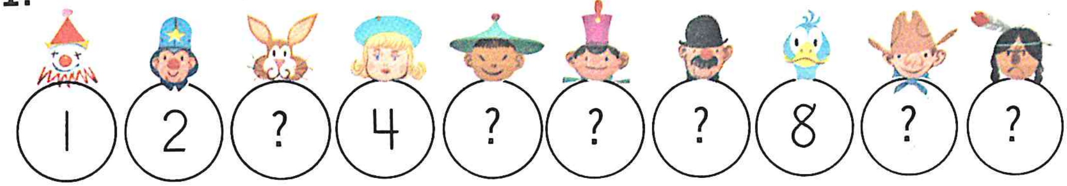
10.



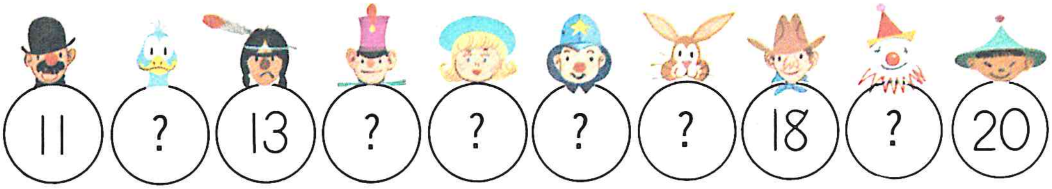
Writing the numerals through 30

What is missing?

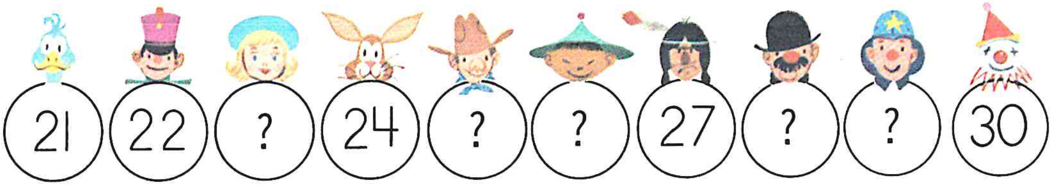
1.



1 2 ? 4 ? ? ? 8 ? ?



11 ? 13 ? ? ? ? 18 ? 20



21 22 ? 24 ? ? 27 ? ? 30

2.

11 12 ?

16 17 ?

18 19 ?

9 10 ?

22 23 ?

12 13 ?

25 26 ?

28 29 ?

3.

15 ? 17

22 ? 24

27 ? 29

11 ? 13

18 ? 20

28 ? 30

9 ? 11

14 ? 16

4.

? 15 16

? 10 11

? 26 27

? 18 19

? 20 21

? 17 18

? 23 24

? 12 13

Comparing numbers

<	3 < 5	3 is less than 5
>	9 > 4	9 is greater than 4
=	6 = 5 + 1	6 equals 5 plus 1.

Which sign will make each sentence true?

1.

4 ● 3
4 ● 1
4 ● 3 + 1

5 ● 6
1 ● 5
5 ● 5 + 1

10 ● 9
1 ● 10
10 ● 9 + 1

2.

4 − 3 ● 1
4 − 3 ● 0
4 − 3 ● 2

6 − 1 ● 6
6 − 2 ● 4
6 − 3 ● 2

8 − 1 ● 9
8 − 1 ● 5
8 − 1 ● 7

3.

10 ● 9
10 ● 11

11 ● 13
15 ● 13

14 ● 12
16 ● 18

4.

19 ● 20
21 ● 20

27 ● 24
25 ● 29

32 ● 36
38 ● 35

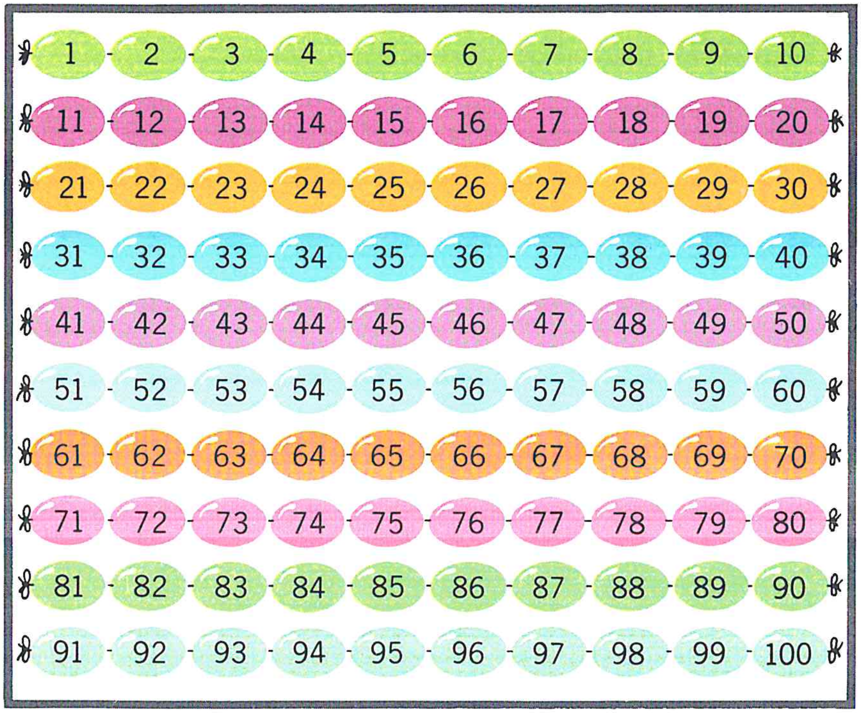
5.

30 ● 20
10 ● 20

5 ● 15
25 ● 15

21 ● 12
23 ● 32

Using a hundred chart



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1. Count the beads by tens. Write the numerals.

2. 20 = ☐ tens 50 = ☐ tens 100 = ☐ tens

3. 32 = ☐ tens ☐ ones, so 32 = 30 + ☐

41 = ☐ tens ☐ one, so 41 = 40 + ☐

64 = ☐ tens ☐ ones, so 64 = 60 + ☐

73 = ☐ tens ☐ ones, so 73 = 70 + ☐

99 = ☐ tens ☐ ones, so 99 = 90 + ☐

Using a hundred chart

1	2	?	4	?	6	7	?	9	10
11	?	13	?	?	16	?	18	?	20
21	?	23	?	?	?	?	28	?	30
31	?	?	34	?	36	?	?	?	40
?	?	43	?	45	?	?	48	?	50
?	52	?	54	?	?	57	?	?	?
61	?	63	?	65	?	?	68	?	?
?	?	73	?	?	76	?	?	?	80
?	82	?	84	?	?	?	88	?	90
?	?	?	94	?	?	97	?	99	?

1.	2.	3.
47 48 ?	73 ? 75	? 50 51
64 65 ?	46 ? 48	? 92 93
56 57 ?	79 ? 81	? 99 100
38 39 ?	65 ? 67	? 20 21

4. Which are other names for 75?

70 + 5 50 + 7 74 + 1 75 − 1

Review

What is missing?

1. 11 12 13 ? ? ? ? ? ? 20

2.

24	25	?	43	?	45	?	30	31
36	37	?	74	?	76	?	66	67
48	49	?	59	?	61	?	90	91

3.

3 + 3 = ■ 1 + 4 = ■ ■ = 3 + 1
2 + 2 = ■ 2 + 4 = ■ ■ = 2 + 3
0 + 5 = ■ 5 + 1 = ■ ■ = 4 + 2

4.

6 − 1 = ■ 4 − 0 = ■ ■ = 6 − 6
5 − 3 = ■ 5 − 5 = ■ ■ = 6 − 4
6 − 2 = ■ 6 − 3 = ■ ■ = 5 − 2

Write the numeral for:

5. eight six four nine seven

6. 1 ten 9 ones 2 tens 3 ones 3 tens 0 ones

7. What is the other member of this family?

4 + 2 = 6 2 + 4 = 6 6 − 2 = 4

8. Use > or < to make each sentence true.

86 ● 68 57 ● 75 4 − 1 ● 2
45 ● 54 82 ● 28 6 − 5 ● 2

Adding and subtracting one

1. 17 + 1 = △
10 + 1 = △
12 + 1 = △
24 + 1 = △
21 + 1 = △

2. 18 + 1 = △
23 + 1 = △
16 + 1 = △
27 + 1 = △
15 + 1 = △

3. 9 + 1 = △
19 + 1 = △
29 + 1 = △
39 + 1 = △
49 + 1 = △

4. 15 − 1 = △
18 − 1 = △
12 − 1 = △
23 − 1 = △
21 − 1 = △

5. 29 − 1 = △
17 − 1 = △
11 − 1 = △
26 − 1 = △
24 − 1 = △

6. 10 − 1 = △
20 − 1 = △
30 − 1 = △
40 − 1 = △
50 − 1 = △

Use + or − to make each sentence true.

7\.
16 ● 1 = 17
16 ● 1 = 15

20 ● 1 = 19
20 ● 1 = 21

8\.
14 ● 1 = 13
14 ● 1 = 15

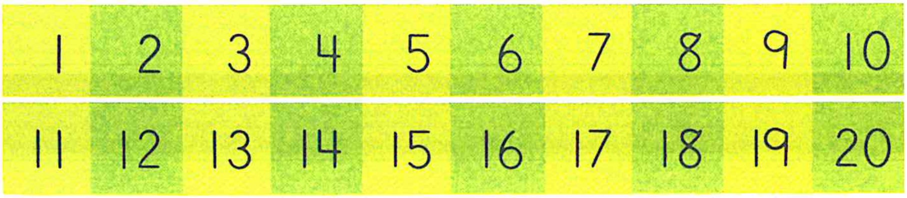
11 ● 1 = 12
11 ● 1 = 10

9\.
29 ● 1 = 30
29 ● 1 = 28

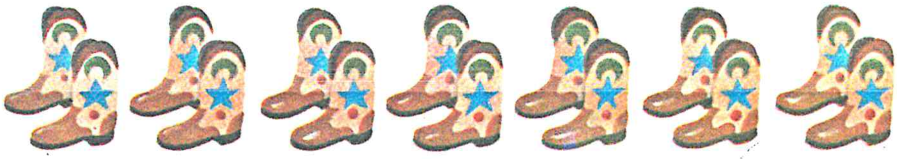
50 ● 1 = 49
49 ● 1 = 50

Counting by twos: odd and even numbers

1. How many blocks? Count them by 2's.



2. How many boots? Count them by 2's.



3. What numerals are missing?

1 ? 3 ? 5 ? 7 ? 9 ?
11 ? 13 ? 15 ? 17 ? 19 ?

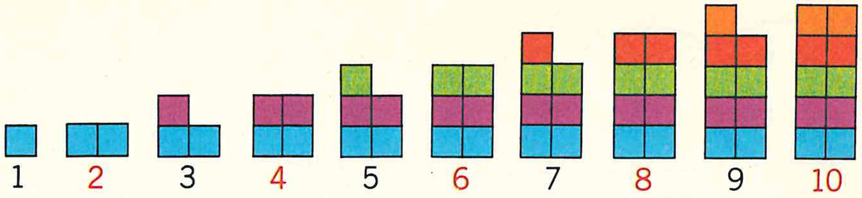
4. ? 2 ? 4 ? 6 ? 8 ? 10
? 12 ? 14 ? 16 ? 18 ? 20

What number will make each sentence true?

5. 2 + 2 = □ 4 + 2 = □ 6 + 2 = □ 8 + 2 = □

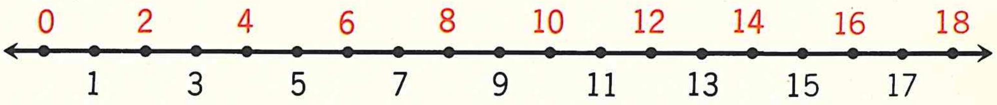
6. 1 + 2 = □ 3 + 2 = □ 5 + 2 = □ 7 + 2 = □

Counting by twos: odd and even numbers



1. 2 blocks make 1 pair of blocks.
4 blocks make 2 pairs of blocks.
6 blocks make ? pairs of blocks.
8 blocks make ? pairs of blocks.
10 blocks make ? pairs of blocks.

2. 3 blocks make 1 pair with 1 block left over.
5 blocks make 2 pairs with 1 block left over.
7 blocks make ? pairs with 1 block left over.
9 blocks make ? pairs with 1 block left over.
11 blocks make ? pairs with 1 block left over.



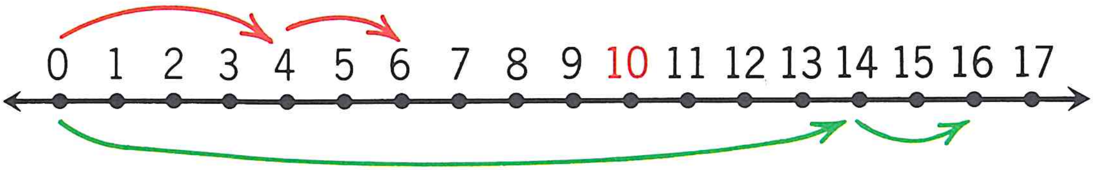
3. Choose the right answer.

odd even

The red numerals name ? numbers.

The black numerals name ? numbers.

Adding and subtracting two



1. The red arrows show that 4 + 2 = ☐

The green arrows show that 14 + 2 = ☐

2.

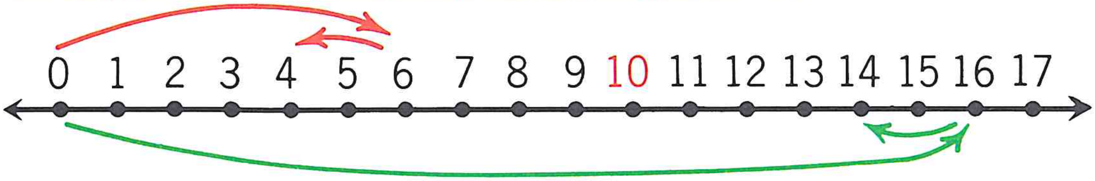
4 + 2 = ☐
14 + 2 = ☐
24 + 2 = ☐
34 + 2 = ☐
44 + 2 = ☐

3.

5 + 2 = ☐
15 + 2 = ☐
25 + 2 = ☐
35 + 2 = ☐
45 + 2 = ☐

4.

6 + 2 = ☐
16 + 2 = ☐
26 + 2 = ☐
36 + 2 = ☐
46 + 2 = ☐



5. The red arrows show that 6 − 2 = ☐

The green arrows show that 16 − 2 = ☐

6.

6 − 2 = ☐
16 − 2 = ☐
26 − 2 = ☐
36 − 2 = ☐
46 − 2 = ☐

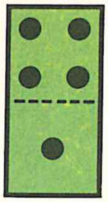
7.

9 − 2 = ☐
19 − 2 = ☐
29 − 2 = ☐
39 − 2 = ☐
49 − 2 = ☐

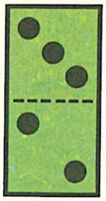
8.

8 − 2 = ☐
18 − 2 = ☐
28 − 2 = ☐
38 − 2 = ☐
48 − 2 = ☐

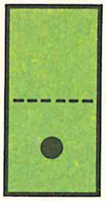
Writing addition and subtraction examples



$\begin{array}{r} 4 \\ +\,1 \\ \hline \end{array}$ 🟩

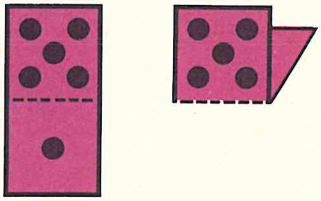


$\begin{array}{r} 3 \\ +\,2 \\ \hline \end{array}$ 🟩

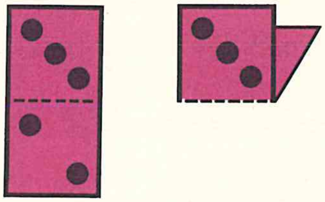


$\begin{array}{r} 0 \\ +\,1 \\ \hline \end{array}$ 🟩

1.	$\begin{array}{r} 2 \\ +\,3 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +\,7 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ +\,3 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ +\,1 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ +\,1 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ +\,4 \\ \hline \end{array}$
2.	$\begin{array}{r} 2 \\ +\,2 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +\,5 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ +\,0 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ +\,1 \\ \hline \end{array}$	$\begin{array}{r} 0 \\ +\,0 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ +\,2 \\ \hline \end{array}$
3.	$\begin{array}{r} 6 \\ +\,0 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +\,9 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ +\,2 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +\,4 \\ \hline \end{array}$	$\begin{array}{r} 0 \\ +\,7 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ +\,1 \\ \hline \end{array}$



$\begin{array}{r} 6 \\ -\,1 \\ \hline \end{array}$ 🟥



$\begin{array}{r} 5 \\ -\,2 \\ \hline \end{array}$ 🟥

4.	$\begin{array}{r} 6 \\ -\,1 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -\,0 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ -\,3 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ -\,4 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -\,8 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ -\,2 \\ \hline \end{array}$
5.	$\begin{array}{r} 5 \\ -\,3 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ -\,5 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -\,1 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ -\,2 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -\,0 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ -\,1 \\ \hline \end{array}$
6.	$\begin{array}{r} 6 \\ -\,4 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -\,7 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -\,1 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ -\,6 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ -\,2 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -\,0 \\ \hline \end{array}$

Using addition to solve problems

1. Jack has 3 orange cars.
He has 2 black cars.
How many cars has he in all?

$$\begin{array}{r} 3 \\ +\ 2 \\ \hline ? \end{array}$$

2. Ann has 2 big cats.
She has 4 little cats.
How many cats has she?

$$\begin{array}{r} 2 \\ +\ ? \\ \hline ? \end{array}$$

3. Ted has 2 white dogs.
He has 2 brown dogs.
How many dogs has he?

$$\begin{array}{r} 2 \\ +\ ? \\ \hline ? \end{array}$$

4. Dick had 3 airplanes.
He made 3 more airplanes.
How many planes has he now?

$$\begin{array}{r} 3 \\ +\ ? \\ \hline ? \end{array}$$

5. Mary has 1 book.
Sue has 3 books.
How many books have they together?

$$\begin{array}{r} 1 \\ +\ ? \\ \hline ? \end{array}$$

6. Joe had 1 Indian arrowhead.
He found 8 more.
How many arrowheads has he now?

$$\begin{array}{r} 1 \\ +\ ? \\ \hline ? \end{array}$$

Using subtraction to solve problems

1. Dick had 5 kittens.
He gave Ann 1 kitten.
How many kittens are left?

$$\begin{array}{r} 5 \\ -\ 1 \\ \hline ? \end{array}$$

2. John had 6 apples.
He ate 2 apples.
How many apples are left?

$$\begin{array}{r} 6 \\ -\ ? \\ \hline ? \end{array}$$

3. Jack had 5 balloons.
Two balloons broke.
How many balloons had he then?

$$\begin{array}{r} 5 \\ -\ ? \\ \hline ? \end{array}$$

4. Ted had 3 ducks.
He gave away one.
How many ducks had he then?

$$\begin{array}{r} 3 \\ -\ ? \\ \hline ? \end{array}$$

5. Sue had 4 rabbits.
Two ran away.
How many rabbits are left?

$$\begin{array}{r} 4 \\ -\ ? \\ \hline ? \end{array}$$

6. Joe had 8 post cards.
He sent 1 post card.
How many post cards are left?

$$\begin{array}{r} 8 \\ -\ ? \\ \hline ? \end{array}$$

Writing number sentences

1.

Jane had 12 eggs.
She broke one.
How many were left?

2.

Paul is 10 years old.
Peg is 2 years older.
How old is Peg?

3.

Bob caught 15 fish.
He caught 1 more fish.
How many had he then?

4.

Tom saw 11 redbirds.
He saw 2 bluebirds.
Tom saw _?_ birds in all.

5.

Peter had 18 apples.
He ate two of them.
How many were left?

6.

Bill had 12 marbles.
He found 2 more.
How many had he then?

7.

Sue is 13 years old.
Tom is 1 year younger.
How old is Tom?

8.

Sam had 35 stamps.
He gave away one.
How many had he then?

9.

Bill had 24 pennies.
He lost two.
How many had he then?

10.

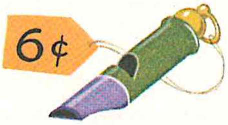
25 girls were on a bus.
2 girls got off.
_?_ girls were left.

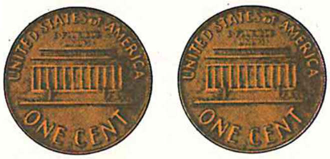
Matching coins with costs

1 penny
1¢

1 nickel
5¢

1 dime
10¢



A


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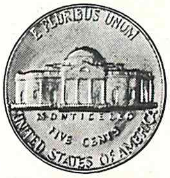

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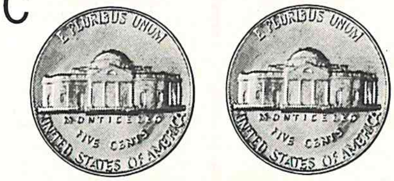

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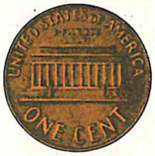

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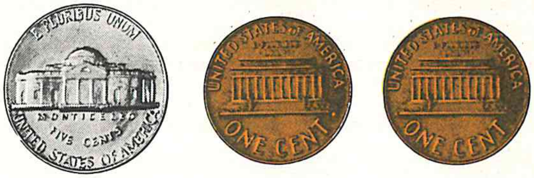

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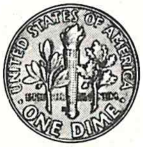

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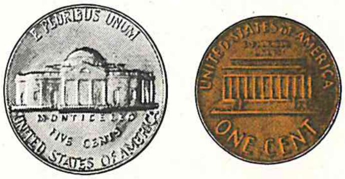

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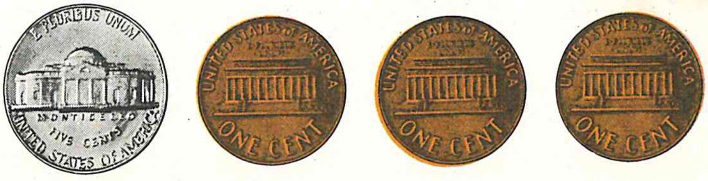


Solving problems about buying toys

Balloon
1¢

Ball
2¢

Horn
3¢

Doll
4¢

Plane
5¢

Truck
6¢

1. A doll costs ?
A ball costs ?
Both cost ?

2. A ball costs ?
A horn costs ?
Both cost ?

3. A plane costs ?
A balloon costs ?
Both cost ?

4. A balloon costs ?
A truck costs ?
Both cost ?

5. A horn costs ?
Two horns cost ?

6. A balloon costs ?
Three balloons cost ?

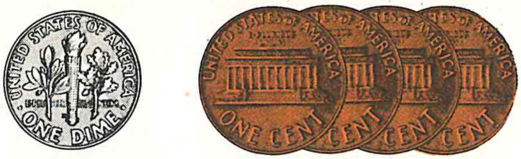
7. Betty has 6¢.
She buys a doll.
She has left ? ¢.

8. Jack has 5¢.
He buys a plane.
He has left ? ¢.

9. Dick has 8¢.
He buys a balloon.
He has left ? ¢.

10. Sue has 6¢.
She buys a horn.
She has left ? ¢.

Counting money

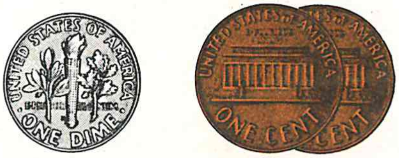


Dimes	Pennies
1	4

14¢

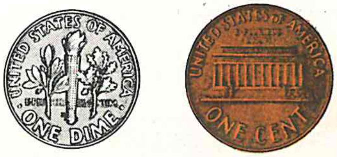
Choose the amount the coins show.

A



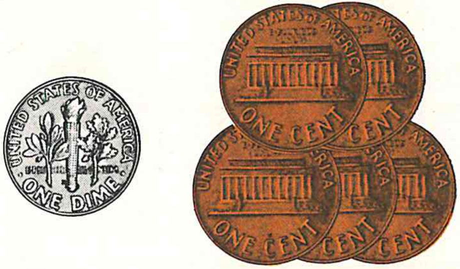
12¢ 13¢ 14¢

B



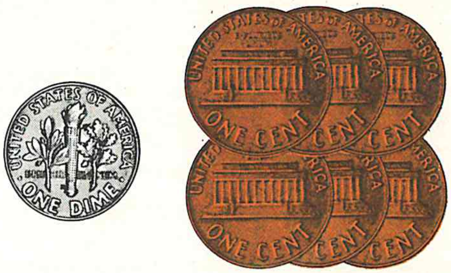
10¢ 11¢ 12¢

C



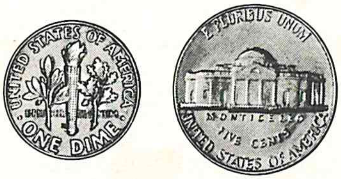
15¢ 16¢ 17¢

D



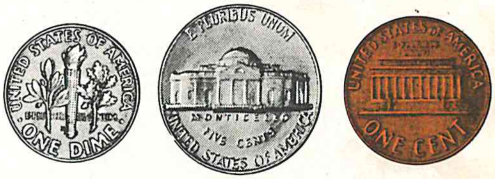
15¢ 16¢ 17¢

E



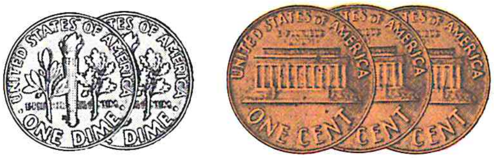
13¢ 14¢ 15¢

F



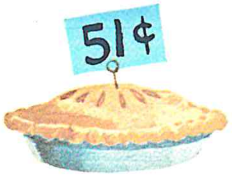
16¢ 17¢ 18¢

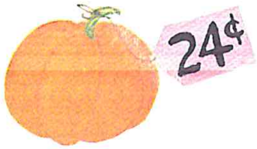
Matching coins with costs

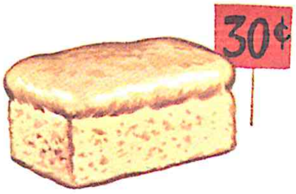


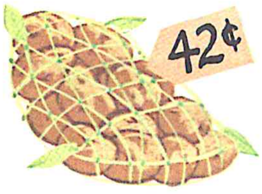
Dimes	Pennies
2	3

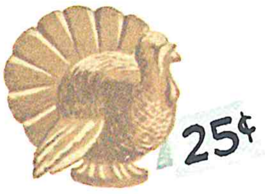
23¢



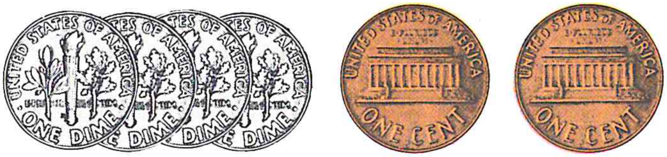








A



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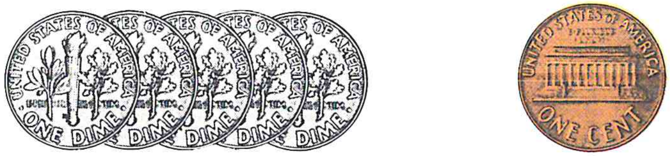

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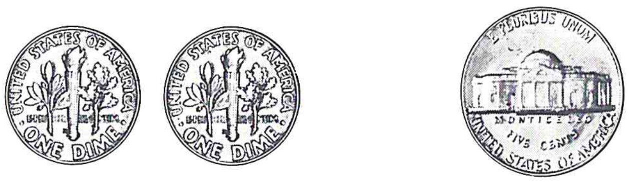

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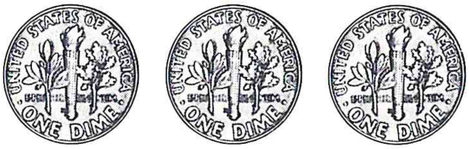

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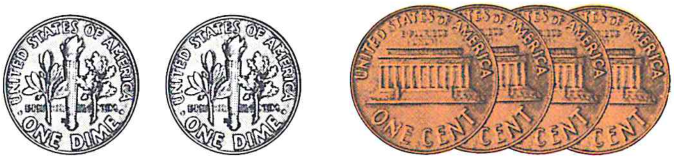
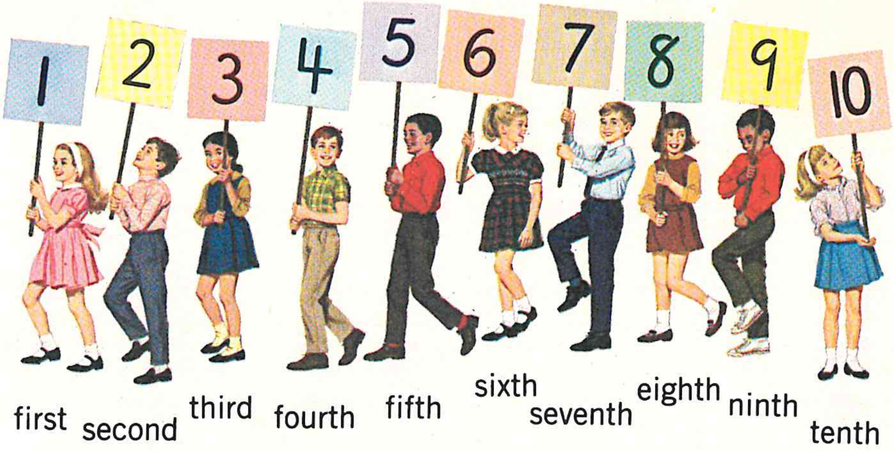


Reading names for numbers



1. The first child has a ?

   The third child has a ?

   The fifth child has a ?

   The tenth child has a ?

   The ninth child has a ?

   The fourth child has a ?

   The sixth child has a ?

   The second child has a ?

   The seventh child has a ?

   The eighth child has an ?

2. Which is a boy?
   Which is a girl?

   second child

   eighth child

   fourth child

   seventh child

   sixth child

   ninth child

   tenth child

   third child

Review

Use =, >, or < to make each sentence true.

1.

three ● 3
nine ● 6
six ● 8
ten ● 10

2.

3 tens 4 ones ● 43
2 tens 3 ones ● 23
4 tens 3 ones ● 34
8 tens 0 ones ● 80

3.

25 ● 32
42 ● 56
18 ● 81
32 ● 23

4.

40 + 2 ● 42
50 + 4 ● 45
60 + 3 ● 63
70 + 8 ● 87

5.

77 + 1 ● 77
56 + 1 ● 58
45 − 1 ● 44
30 − 1 ● 29

6.

6 ● 3 + 2
9 ● 0 + 9
5 ● 4 + 2
4 ● 2 + 2

What number will make each sentence true?

7. 7 + 🟪 = 8 3 + 🟪 = 6 🟪 + 1 = 4

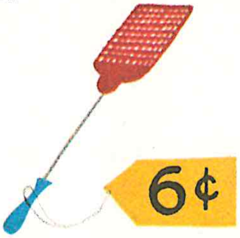
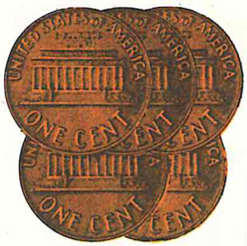
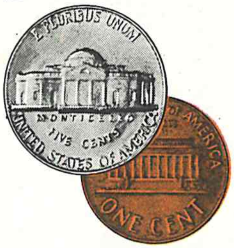
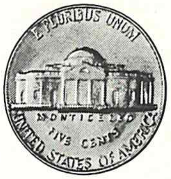
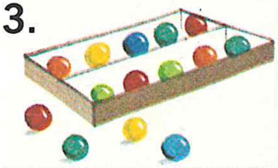
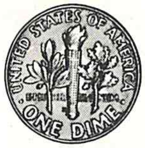
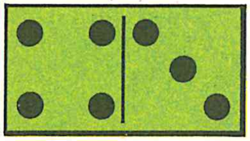
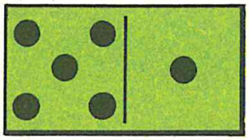
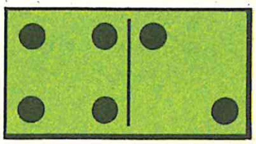
3 + 2 = 🟪 🟪 + 8 = 8 2 + 🟪 = 6

Copy and write the answers.

8.

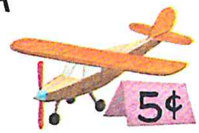
6	4	7	6	9	5
− 3	− 4	− 1	− 4	− 1	− 3
🟩	🟩	🟩	🟩	🟩	🟩

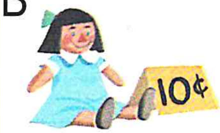
Test 1

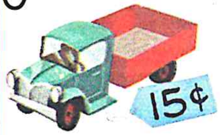
	A	B	C
1. 			
2. 30 ? 32	31	29	36
3. 	9	17	14
4. 43	40	46	48
5. 	1	5	10
6. 3 tens 4 ones	43	34	304
7. $\begin{array}{r}4\\+\ 2\\\hline 6\end{array}$			

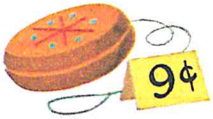
Test 2

1.

A 

B 

C 

D 

2.

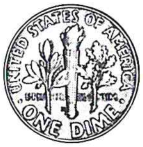
A ten

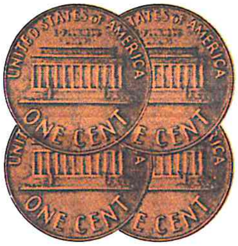
B seven

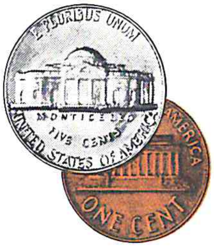
C five

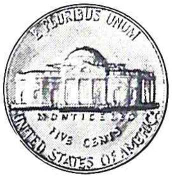
D eight

3.

A 

B 

C 

D 

4.

A $\begin{array}{r}3\\+\ 2\\\hline\end{array}$

B $\begin{array}{r}5\\+\ 1\\\hline\end{array}$

C $\begin{array}{r}4\\+\ 3\\\hline\end{array}$

D $\begin{array}{r}2\\+\ 2\\\hline\end{array}$

5.

A $\begin{array}{r}5\\-\ 3\\\hline 2\end{array}$

B $\begin{array}{r}2\\+\ 3\\\hline 5\end{array}$

C $\begin{array}{r}3\\+\ 2\\\hline 5\end{array}$

D $\begin{array}{r}5\\-\ 2\\\hline 3\end{array}$

6.

A 12

B 34

C 25

D 40

7.

A $1 + 3 = 4$

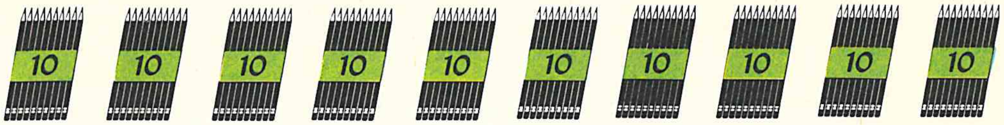
B $4 - 3 = 1$

C $4 = 3 + 1$

D $4 + 1 = 5$

Adding tens

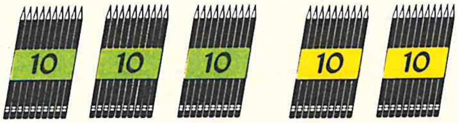
1.



2 tens = □ 5 tens = □ 9 tens = □

2.

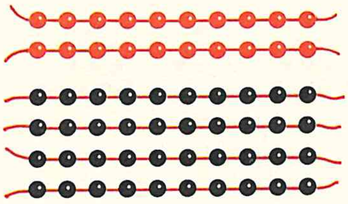
3 + 2 = □



3 tens + 2 tens = □ tens

3.

Jane had 20 beads.
She got 40 more.
Now she has ? .



$$\begin{array}{r} 20 \\ +\ 40 \\ \hline \square \end{array}$$

4.

$$\begin{array}{r} 5 \\ +\ 1 \\ \hline \end{array} \qquad \begin{array}{r} 5 \text{ tens} \\ +\ 1 \text{ ten} \\ \hline \end{array} \qquad \begin{array}{r} 50 \\ +\ 10 \\ \hline \end{array}$$

5.

$$\begin{array}{r} 4 \\ +\ 2 \\ \hline \end{array} \qquad \begin{array}{r} 4 \text{ tens} \\ +\ 2 \text{ tens} \\ \hline \end{array} \qquad \begin{array}{r} 40 \\ +\ 20 \\ \hline \end{array}$$

6.

$$\begin{array}{r} 2 \\ +\ 3 \\ \hline \end{array} \qquad \begin{array}{r} 2 \text{ tens} \\ +\ 3 \text{ tens} \\ \hline \end{array} \qquad \begin{array}{r} 20 \\ +\ 30 \\ \hline \end{array}$$

7.

$$\begin{array}{r} 8 \\ +\ 1 \\ \hline \end{array} \qquad \begin{array}{r} 8 \text{ tens} \\ +\ 1 \text{ ten} \\ \hline \end{array} \qquad \begin{array}{r} 80 \\ +\ 10 \\ \hline \end{array}$$

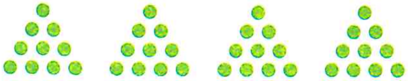
8.

$$\begin{array}{r} 20 \\ +\ 10 \\ \hline \end{array} \qquad \begin{array}{r} 10 \\ +\ 40 \\ \hline \end{array} \qquad \begin{array}{r} 20 \\ +\ 20 \\ \hline \end{array} \qquad \begin{array}{r} 50 \\ +\ 10 \\ \hline \end{array} \qquad \begin{array}{r} 10 \\ +\ 30 \\ \hline \end{array} \qquad \begin{array}{r} 30 \\ +\ 30 \\ \hline \end{array}$$

9. 1 + 1 = □ 1 ten + 1 ten = □ tens 10 + 10 = □

Subtracting tens

1.



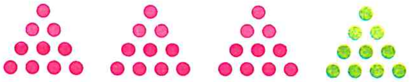
10 dots in each set.

? sets of ten.

4 tens = ■

2.

4 − 1 = ■



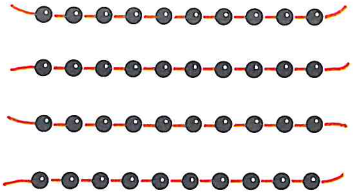
4 tens − 1 ten = ■ tens

3.

Sue had 40 beads.

She gave away 20.

Now she has ? beads.



$\begin{array}{r} 40 \\ -\ 20 \\ \hline \blacksquare \end{array}$

4.

$\begin{array}{r} 5 \\ -\ 1 \\ \hline \end{array}$ $\begin{array}{r} 5 \text{ tens} \\ -\ 1 \text{ ten} \\ \hline \end{array}$ $\begin{array}{r} 50 \\ -\ 10 \\ \hline \end{array}$

5.

$\begin{array}{r} 2 \\ -\ 1 \\ \hline \end{array}$ $\begin{array}{r} 2 \text{ tens} \\ -\ 1 \text{ ten} \\ \hline \end{array}$ $\begin{array}{r} 20 \\ -\ 10 \\ \hline \end{array}$

6.

$\begin{array}{r} 4 \\ -\ 3 \\ \hline \end{array}$ $\begin{array}{r} 4 \text{ tens} \\ -\ 3 \text{ tens} \\ \hline \end{array}$ $\begin{array}{r} 40 \\ -\ 30 \\ \hline \end{array}$

7.

$\begin{array}{r} 6 \\ -\ 1 \\ \hline \end{array}$ $\begin{array}{r} 6 \text{ tens} \\ -\ 1 \text{ ten} \\ \hline \end{array}$ $\begin{array}{r} 60 \\ -\ 10 \\ \hline \end{array}$

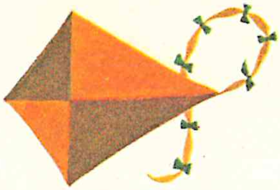
8.

$\begin{array}{r} 30 \\ -\ 20 \\ \hline \end{array}$ $\begin{array}{r} 60 \\ -\ 30 \\ \hline \end{array}$ $\begin{array}{r} 50 \\ -\ 20 \\ \hline \end{array}$ $\begin{array}{r} 60 \\ -\ 40 \\ \hline \end{array}$ $\begin{array}{r} 50 \\ -\ 30 \\ \hline \end{array}$ $\begin{array}{r} 60 \\ -\ 20 \\ \hline \end{array}$

9. 3 − 1 = ■ 3 tens − 1 ten = ■ tens 30 − 10 = ■

Solving problems about buying toys

10¢



20¢

30¢

40¢

50¢

1. A kite costs __?__¢.
A comb costs __?__¢.
Both cost __?__¢.

$20 + 10 = ■$

2. A bracelet costs __?__¢.
A kite costs __?__¢.
Both cost __?__¢.

3. A comb costs __?__¢.
A flashlight costs __?__¢.
Both cost __?__¢.

4. A kite costs __?__¢.
A game costs __?__¢.
Both cost __?__¢.

5. Jack has 50¢.
He buys a kite.
He has __?__¢ left.

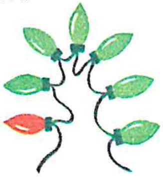
$50 - 20 = ■$

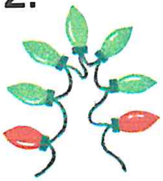
6. Ted has 60¢.
He buys a game.
He has __?__¢ left.

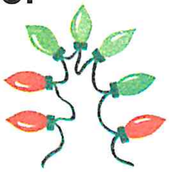
7. Nancy has 50¢.
She buys a bracelet.
She has __?__¢ left.

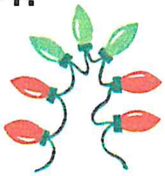
8. Joe has 50¢.
He buys a flashlight.
He has __?__¢ left.

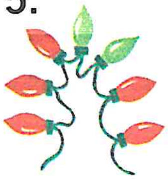
Studying facts with sums of 7

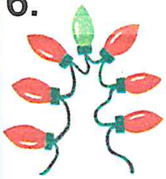
1.

? lights
? green lights
? red light

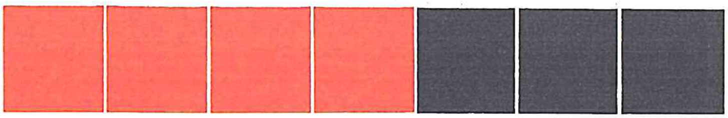
2.

? lights
? green lights
? red lights

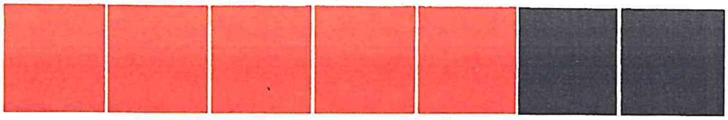
3.

? lights
? green lights
? red lights

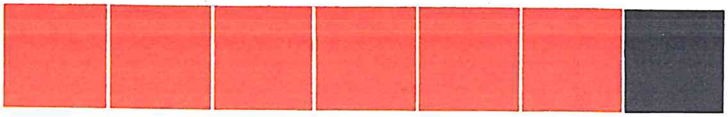
4.

? lights
? green lights
? red lights

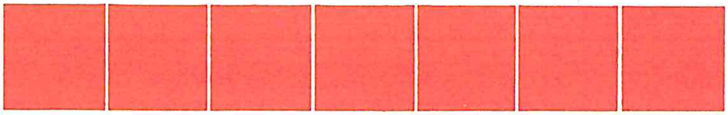
5.

? lights
? green lights
? red lights

6.

? lights
? green light
? red lights

7.

7 = 4 + △
7 = 3 + △

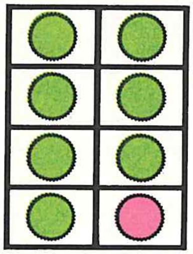
8.

7 = 5 + △
7 = 2 + △

9.

7 = 6 + △
7 = 1 + △

10.

7 = 7 + △
7 = 0 + △

Studying facts with sums of 8

1.

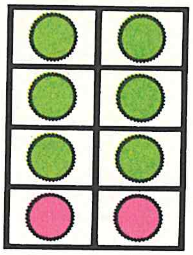


8 cakes

? are green.

? is pink.

2.

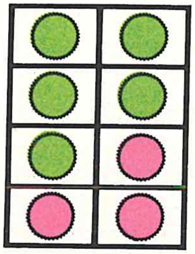


8 cakes

? are green.

? are pink.

3.

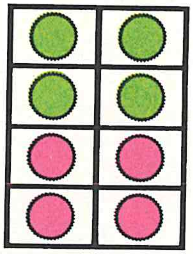


8 cakes

? are green.

? are pink.

4.

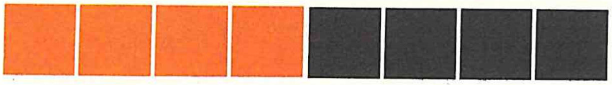


8 cakes

? are green.

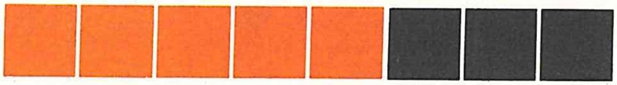
? are pink.

5.



8 = 4 + △

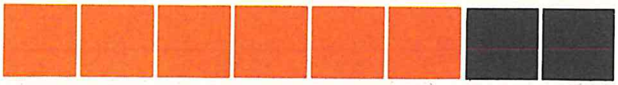
6.



8 = 5 + △

8 = 3 + △

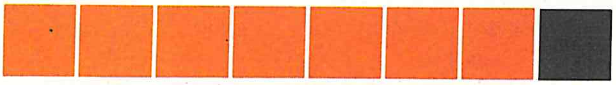
7.



8 = 6 + △

8 = 2 + △

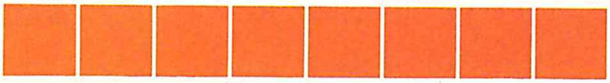
8.



8 = 7 + △

8 = 1 + △

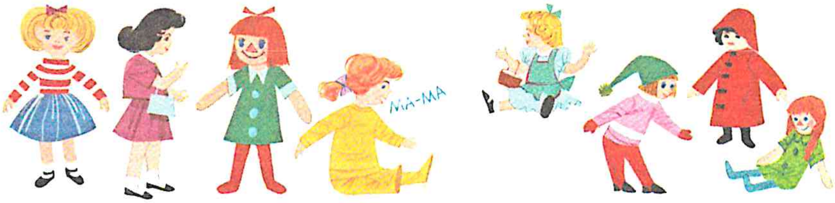
9.



8 = 8 + △

8 = 0 + △

Studying related facts



1. How many big dolls?
How many little dolls?
4 + 4 = ☐

2. Cover 4 big dolls.
You see how many?
8 − 4 = ☐

3. ___?___ dolls are sitting.
___?___ are standing.
3 + 5 = ☐   5 + 3 = ☐

4. Cover 5 dolls.
You see how many?
8 − 5 = ☐   8 − 3 = ☐

5. ___?___ dolls have hats.
___?___ have no hats.
2 + 6 = ☐   6 + 2 = ☐

6. Cover 6 dolls.
You see how many?
8 − 6 = ☐   8 − 2 = ☐

7. 1 doll talks.
7 dolls do not talk.
1 + 7 = ☐   7 + 1 = ☐

8. Cover 7 dolls.
You see how many?
8 − 7 = ☐   8 − 1 = ☐

9. 0 dolls skate.
8 dolls do not skate.
0 + 8 = ☐   8 + 0 = ☐

10. Cover 8 dolls.
You see how many?
8 − 8 = ☐   8 − 0 = ☐

Studying number sentence families

Sue wants 8 lollipops.

She can get:

1. 2 red and ? green — 4 green and ? red
2. 6 red and ? green — 3 green and ? red
3. 5 red and ? green — 7 green and ? red
4. 8 red and ? green — 1 green and ? red

5. ××××××××

7 + 1 = ▲

1 + 7 = ▲

8 − 1 = ▲

8 − 7 = ▲

6. ✪✪✪✪✪✪✪✪

6 + 2 = ▲

2 + 6 = ▲

8 − 2 = ▲

8 − 6 = ▲

7. ●●●●●●●●

5 + 3 = ▲

3 + 5 = ▲

8 − 3 = ▲

8 − 5 = ▲

Use + or − to make true sentences.

8.

5 ● 3 = 8

5 ● 3 = 2

3 ● 4 = 7

8 ● 2 = 6

9.

9 ● 1 = 8

7 ● 1 = 8

5 ● 2 = 7

0 ● 7 = 7

10.

8 = 4 ● 4

7 = 9 ● 2

8 = 0 ● 8

8 = 8 ● 0

Writing number sentences

1.
Linda had 8 apples.
She ate 3.
How many were left?

2.
Dick is 6 years old.
Sam is 2 years older.
How old is Sam?

3.
Bill has 5 blue planes.
He has 2 other planes.
How many planes has he?

4.
Jim caught 1 fish.
Steve caught 17 fish.
How many fish is that?

5.
Tom had 18 pennies.
He spent one.
How many had he then?

6.
80 children were skating.
50 children went home.
How many were left?

7.
Joe is 8 years old.
Ann is 2 years younger.
How old is Ann?

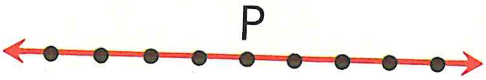
8.
In a club are 40 boys.
There are 30 girls. $\underline{\ ?\ }$
children are in the club.

9.
Jack has 30 stamps.
Ray has 50 stamps.
How many stamps is that?

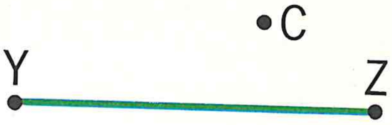
10.
Mary needs 2 pens.
One pen costs 40¢.
She will spend $\underline{\quad ?\quad}$¢.

Points, lines, and line segments

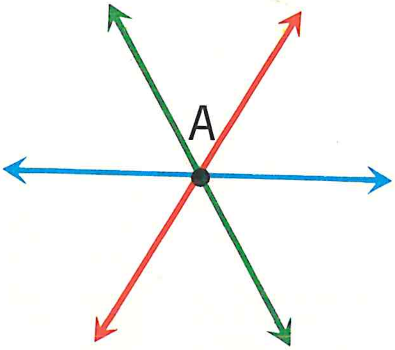
1.



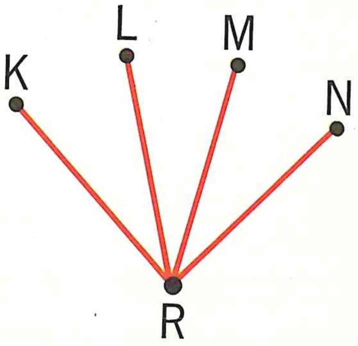
2.

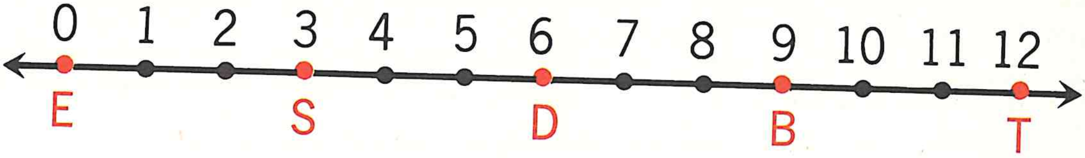


3.



4.





5. Which lettered points are between E and T?

6. Point 2 is two steps from E.

   How far from E is point S? D? B? T?

7. Is point S or point D nearer to E?

   How much nearer?

8. Which is farther from E, point D or point B?

   How much farther?

Using units of measure

1. Count the inches on your ruler.
   Is your ruler 12 inches long?

12 inches make 1 foot.

Choose your answers.

2. Which of these could be about 1 foot long?

dollar bill   towel rack   baseball bat

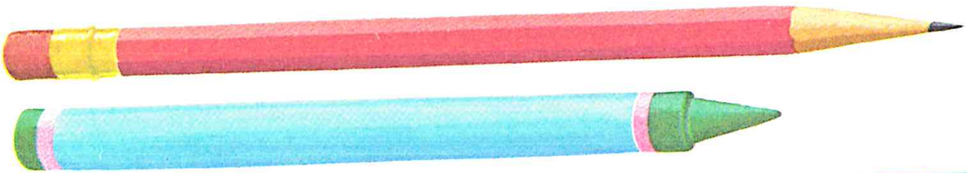
3. Which of these could be about 1 foot wide?

your bed   boy's belt   paper napkin

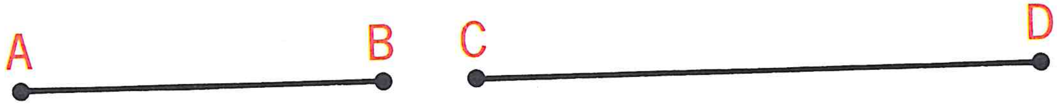
4. Which of these could be about 12 inches high?

baby kitten   cereal box   bedroom door

5. How long is the pencil? the crayon?

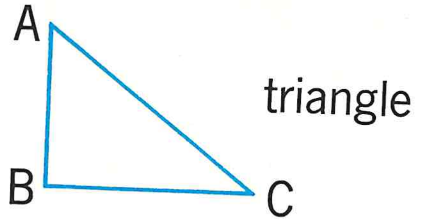


6. How long is each line segment?

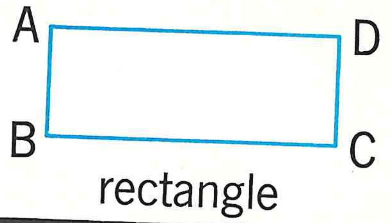


Recognizing triangles and rectangles

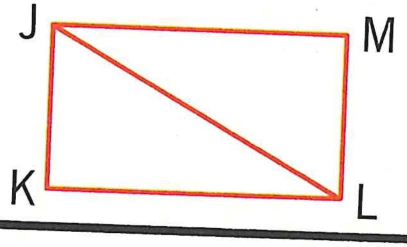
1.



2.



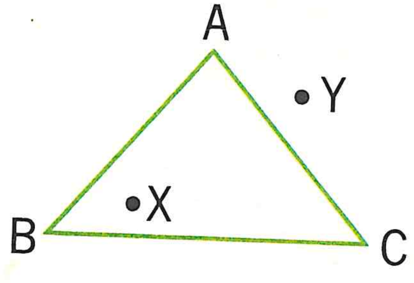
3.



How many red rectangles do you see?

How many triangles?

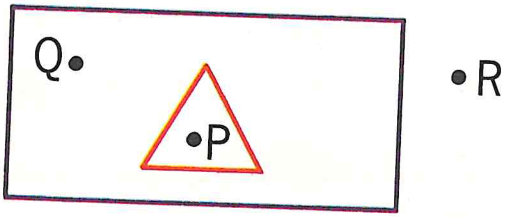
4.



What letters name this triangle? Point X is inside the triangle.

Where is point Y?

5.

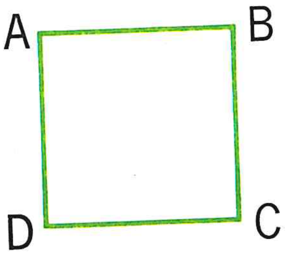


Which point is:

- inside the rectangle and outside the triangle?
- inside the triangle and inside the rectangle?
- outside the triangle and outside the rectangle?

Recognizing rectangles and squares

1.



rectangle

square

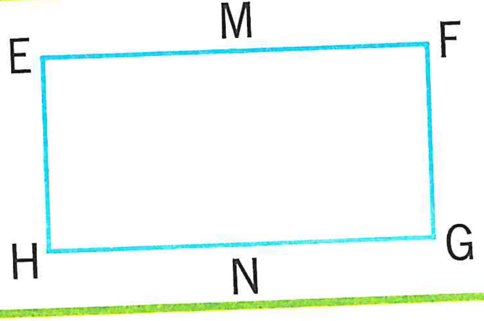
AB ? inch

DC ? inch

AD ? inch

BC ? inch

2.



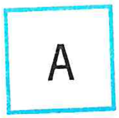
EF ? inches

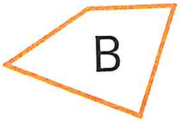
HG ? inches

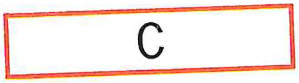
EH ? inch

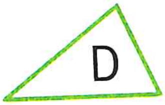
FG ? inch

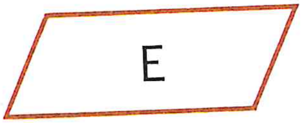
3. Which figures have four sides?
Which are rectangles?
Which is a square?



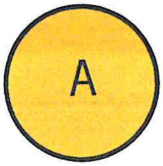


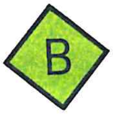


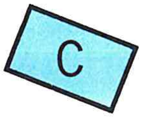


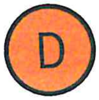


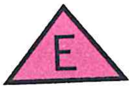
4. Which figure will fit which opening on the board?

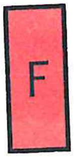


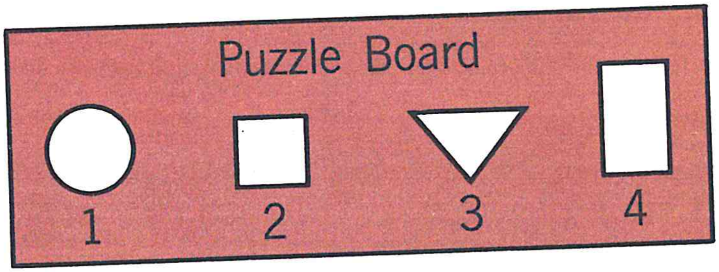


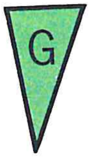






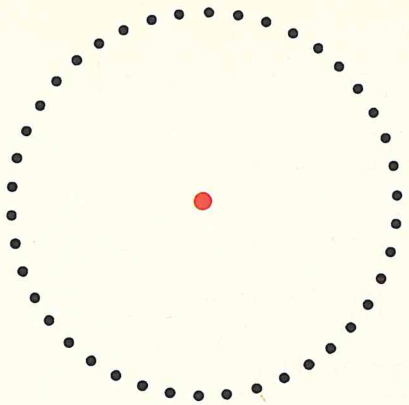






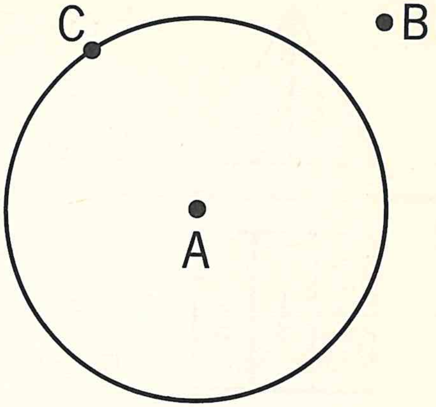
Recognizing a circle as a set of points

1.



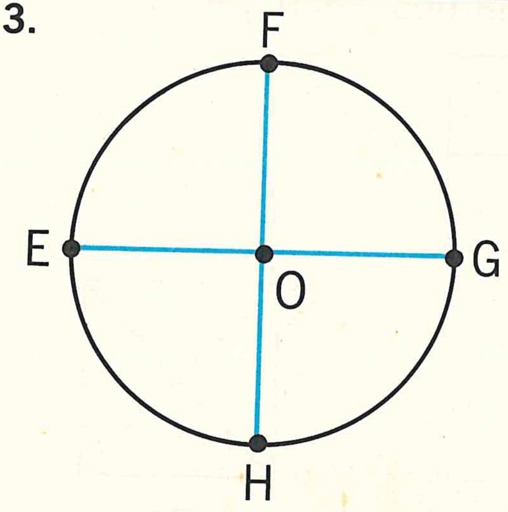
Which point is the center of the circle?

2.



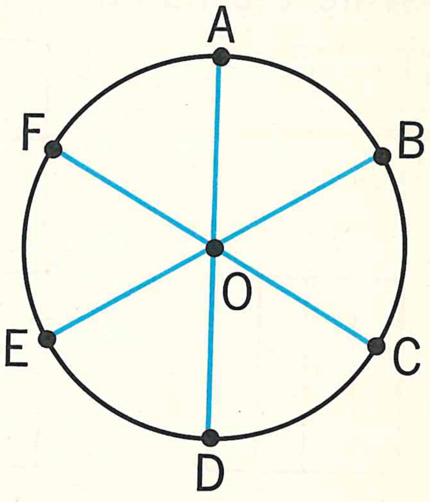
Which point is:
on the circle?
inside the circle?
outside the circle?

3.



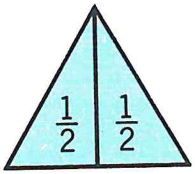
Is segment EG the same length as segment FH?

4.



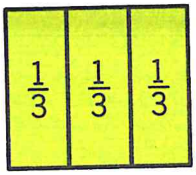
Name five other segments the same length as segment OA.

Identifying halves, thirds, and fourths

1. 

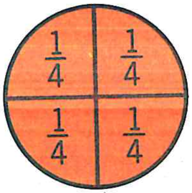
How many parts?
Are the parts the same size?
Each part is one half.

$\frac{1}{2}$

2. 

How many parts?
Are the parts the same size?
Each part is one third.

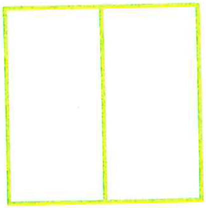
$\frac{1}{3}$

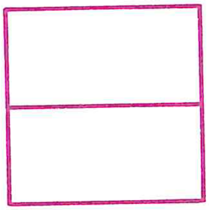
3. 

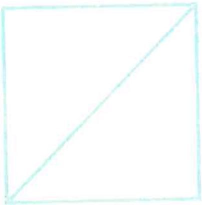
How many parts?
Are the parts the same size?
Each part is one fourth.

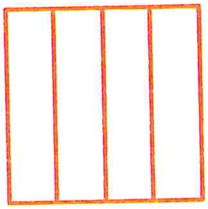
$\frac{1}{4}$

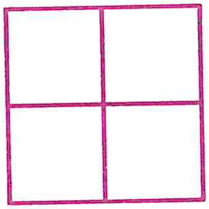
4. Write the numeral that names each part.

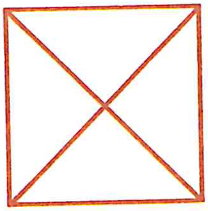
A 

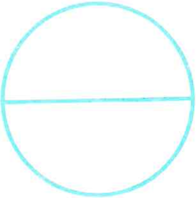
B 

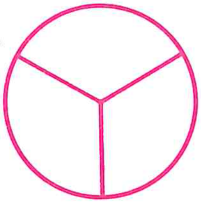
C 

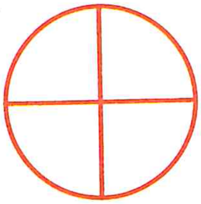
D 

E 

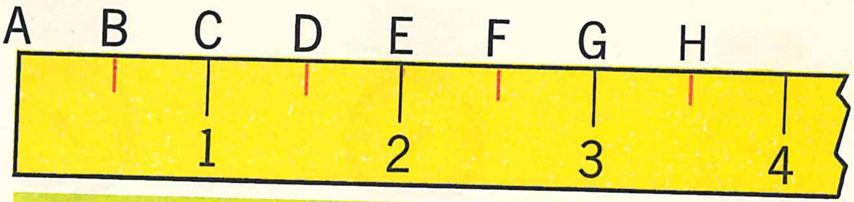
F 

G 

H 

Y 

Using units of measure



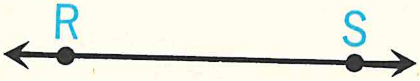
From A to B on the ruler is $\frac{1}{2}$ inch.

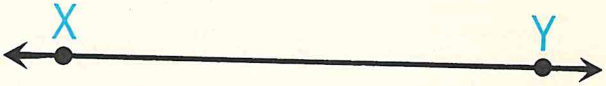
1. From B to C is ?.
   From C to D is ?.
   From D to E is ?.

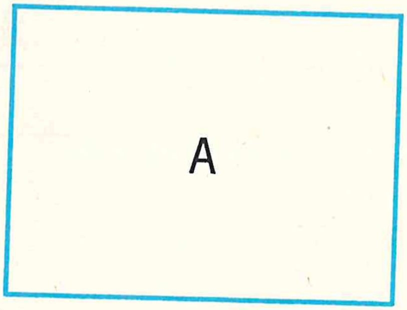
2. From E to F is ?.
   From F to G is ?.
   From G to H is ?.

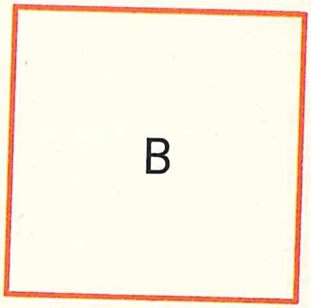
3. From A to C on the ruler is ? inch.
   From A to D is ? inches.
   From A to F is ? inches.

4. How many inches long is segment RS? XY?



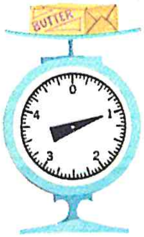


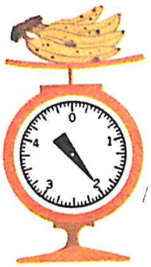


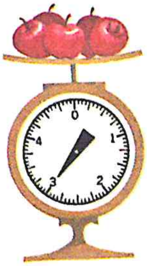


5. How wide is figure A? How high is it?
6. How wide is figure B? How high is it?
7. Which rectangle is a square, A or B?

Measuring weight in pounds

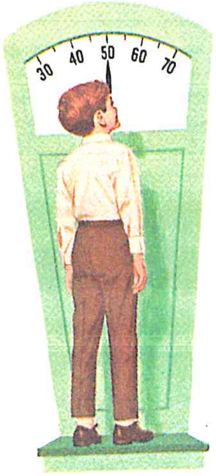






1. The butter weighs: 2 pounds 1 pound
2. The bananas weigh: 2 pounds 3 pounds
3. The apples weigh: 2 pounds 3 pounds
4. Which is sold by the pound?

sugar eggs butter cheese
milk meat ice cream potatoes



5. Bill weighs ?.

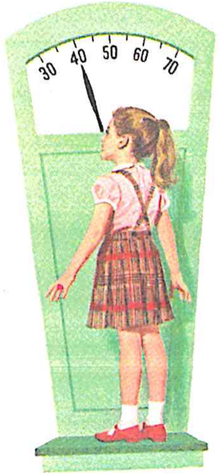
Ann weighs ?.

Who is heavier?

How much heavier?

Who is lighter?

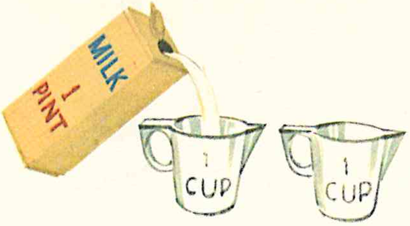
How much lighter?



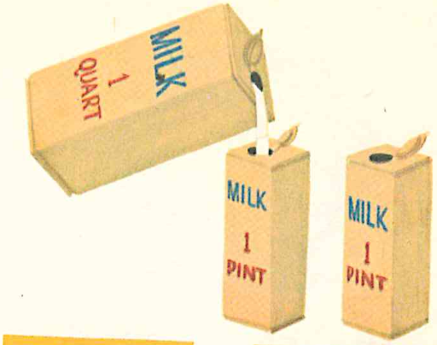
6. About how many pounds do you weigh?

5 pounds 50 pounds

Relating cups, pints, quarts, gallons



1 pint   2 cups



1 quart   2 pints

1 gallon

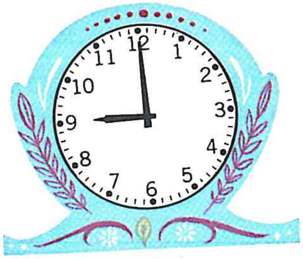
4 quarts

Which is greater? Choose your answer.

1. 1 quart or 1 pint
2. 1 pint or 1 quart
3. 2 cups or 2 pints
4. 1 quart or 1 gallon
5. 1 gallon or 2 quarts
6. 1 gallon or 4 pints
7. 2 quarts or 2 pints
8. 1 quart or 3 pints
9. 1 pint or 3 cups
10. $\frac{1}{2}$ pint or $\frac{1}{2}$ quart
11. $\frac{1}{4}$ gallon or $\frac{1}{4}$ quart
12. $\frac{1}{2}$ quart or 1 cup

Measuring time in half hours

1.

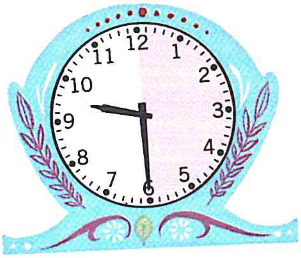


The short hand is at ? .

The long hand is at ? .

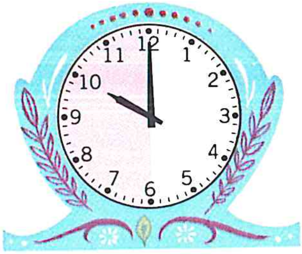
It is ? o'clock.

2.



The long hand has moved halfway around the clock. The short hand is past 9. It is half past ? o'clock.

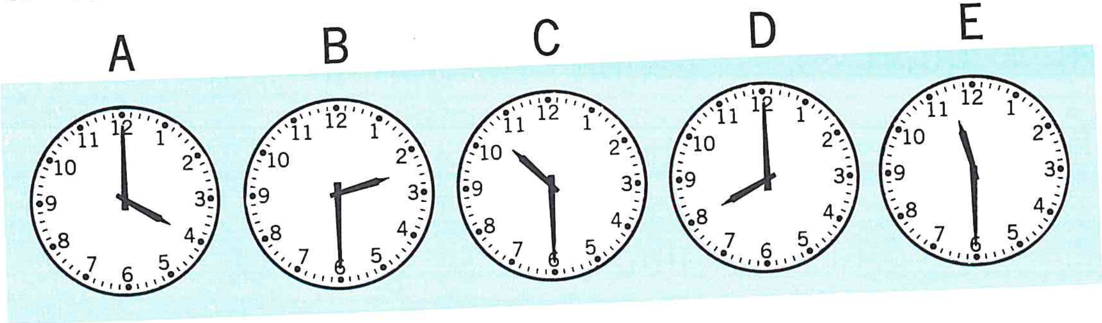
3.



The long hand has moved around the other half of the clock. It is at 12 again.

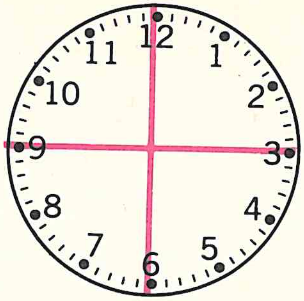
The short hand has moved to 10. It is ? o'clock.

4. Write the time each clock shows.



Measuring time in quarter hours

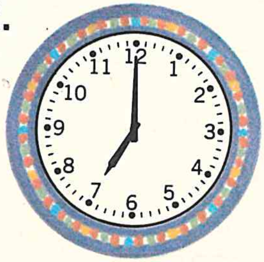
1.



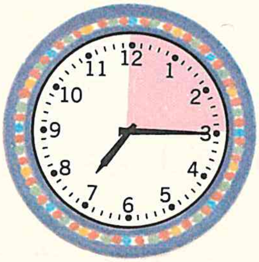
One quarter is another name for one fourth.

How many quarters do you see in the clockface?

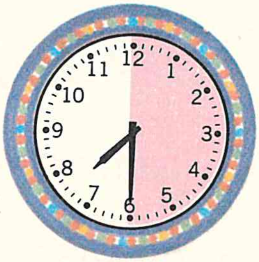
2.



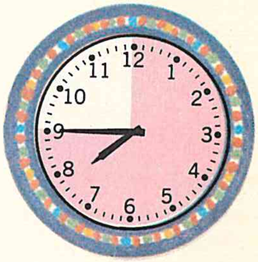
7 o'clock



a quarter past 7

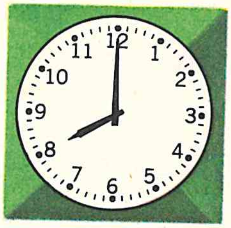


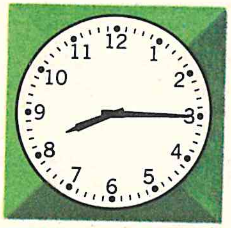
half past 7

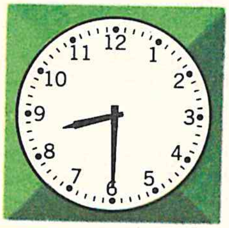


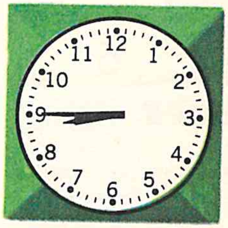
a quarter to 8

3. What time does each clock show?









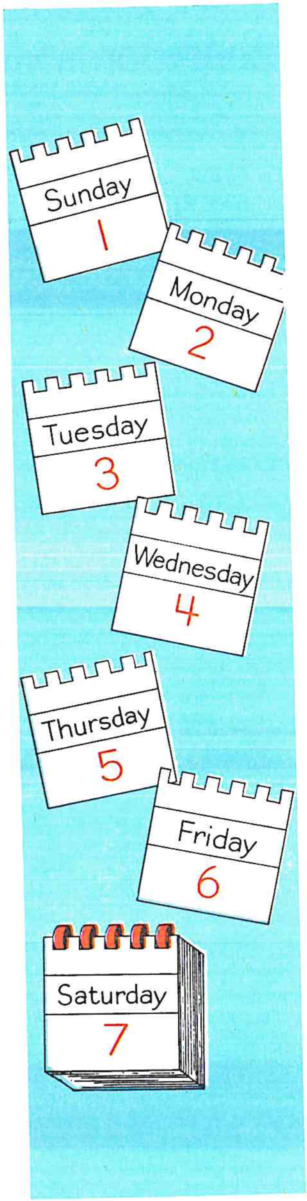
4. On a clock what numeral is

between 2 and 4?
between 5 and 7?
between 8 and 10?
between 11 and 1?

5. Which is the shortest? the longest?

an hour
a half hour
a quarter hour

Measuring time in days and weeks



1. Read the names of the days.
2. How many days are there in the set of days we call a week?
3. Today is ?.

   Yesterday was ?.

   Tomorrow will be ?.
4. Sunday comes just before ?.
5. Wednesday comes just before ?.
6. Friday comes just before ?.
7. Monday comes just after ?.
8. Wednesday comes just after ?.
9. Saturday comes just after ?.
10. Look at your classroom calendar.

The date today is ?.

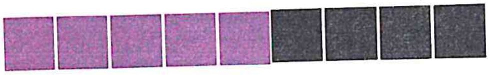
The date 1 week from today will be ?.

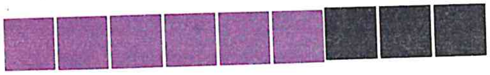
Measuring time in months

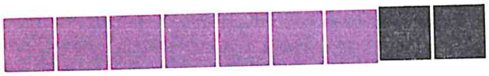
1. Read the names of the months.
2. How many months are there in the set of months we call a year?
3. New Year's Day is ?.
4. March comes just after ?.
5. April comes just after ?.
6. May comes just after ?.
7. June comes just after ?.
8. ? is between May and July.
9. ? comes just before August.
10. ? comes just before September.
11. ? comes just before October.
12. ? comes just before November.
13. ? comes just before December.
14. The last month of the year is ?.

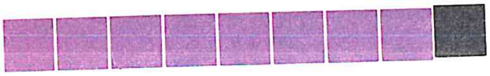
January
February
March
April
May
June
July
August
September
October
November
December

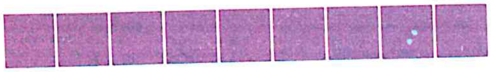
Studying facts with sums of 9

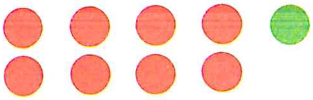
1.  $9 = 5 + \square$ $9 = 4 + \triangle$

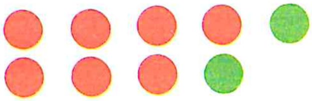
2.  $9 = 6 + \square$ $9 = 3 + \triangle$

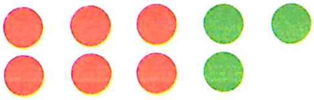
3.  $9 = 7 + \square$ $9 = 2 + \triangle$

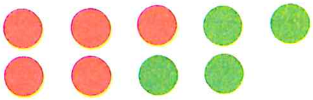
4.  $9 = 8 + \square$ $9 = 1 + \triangle$

5.  $9 = 9 + \square$ $9 = 0 + \triangle$

6. 
9 dots
Cover 1 dot. $9 - 1 = \triangle$
Cover 8 dots. $9 - 8 = \square$

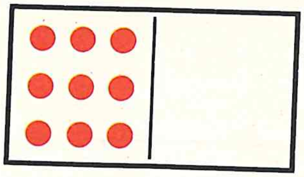
7. 
9 dots
Cover 2 dots. $9 - 2 = \triangle$
Cover 7 dots. $9 - 7 = \square$

8. 
9 dots
Cover 3 dots. $9 - 3 = \triangle$
Cover 6 dots. $9 - 6 = \square$

9. 
9 dots
Cover 4 dots. $9 - 4 = \triangle$
Cover 5 dots. $9 - 5 = \square$

Studying number sentence families

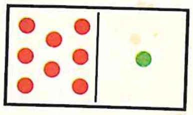
1.



9 + 0 = ▲ 9 − 0 = ▲

0 + 9 = ▲ 9 − 9 = ▲

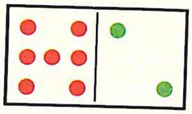
2.



8 + 1 = ▲ 9 − 1 = ▲

1 + 8 = ▲ 9 − 8 = ▲

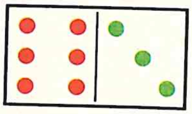
3.



7 + 2 = ▲ 9 − 2 = ▲

2 + 7 = ▲ 9 − 7 = ▲

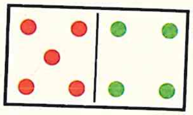
4.



6 + 3 = ▲ 9 − 3 = ▲

3 + 6 = ▲ 9 − 6 = ▲

5.



5 + 4 = ▲ 9 − 4 = ▲

4 + 5 = ▲ 9 − 5 = ▲

6. Copy and write the answers.

$\begin{array}{r} 9 \\ -\,6 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ -\,1 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ -\,7 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ -\,0 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ -\,5 \\ \hline \end{array}$

$\begin{array}{r} 9 \\ -\,9 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ -\,2 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ -\,4 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ -\,8 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ -\,3 \\ \hline \end{array}$

Can you do it?

A

2	?	3
3	3	6
5	4	9

B

1	3	4
?	2	4
3	5	?

C

1	1	2
7	?	7
8	1	?

Making number sentences true

1. What number will make each sentence true? Look for a pattern in each set.

Set A

9 + 0 = 🟩
8 + 1 = 🟩
7 + 2 = 🟩
6 + 3 = 🟩
5 + 4 = 🟩
4 + 5 = 🟩
3 + 6 = 🟩
2 + 7 = 🟩
1 + 8 = 🟩
0 + 9 = 🟩

Set B

9 − 0 = 🟩
9 − 1 = 🟩
9 − 2 = 🟩
9 − 3 = 🟩
9 − 4 = 🟩
9 − 5 = 🟩
9 − 6 = 🟩
9 − 7 = 🟩
9 − 8 = 🟩
9 − 9 = 🟩

2. Use each set of numbers to make four number sentences.

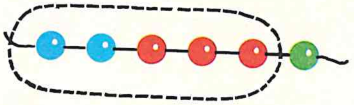
Set C 5, 4, 9
Set D 6, 3, 9
Set E 7, 2, 9
Set F 8, 1, 9

3. Copy and write the answers.

$$\begin{array}{r} 80 \\ +10 \\ \hline \end{array} \qquad \begin{array}{r} 90 \\ -30 \\ \hline \end{array} \qquad \begin{array}{r} 90 \\ -50 \\ \hline \end{array} \qquad \begin{array}{r} 90 \\ -20 \\ \hline \end{array} \qquad \begin{array}{r} 30 \\ +60 \\ \hline \end{array} \qquad \begin{array}{r} 50 \\ +40 \\ \hline \end{array}$$

Finding the sum of three numbers

One way to find the sum of 2, 3, and 1.



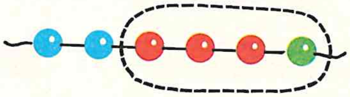
$(2 + 3) + 1 = \underline{?}$

$2 + 3 = 5$

So $(2 + 3) + 1 = 5 + 1$

$5 + 1 = \square$

Another way to find the sum of 2, 3, and 1.



$2 + (3 + 1) = \underline{?}$

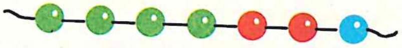
$3 + 1 = 4$

So $2 + (3 + 1) = 2 + 4$

$2 + 4 = \square$

What number will make each sentence true?

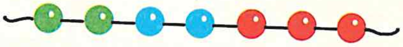
1.



$(4 + 2) + 1 = \square$

$4 + (2 + 1) = \square$

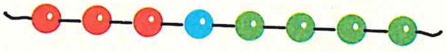
2.



$(2 + 2) + 3 = \square$

$2 + (2 + 3) = \square$

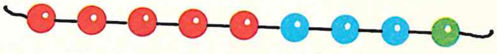
3.



$(3 + 1) + 4 = \square$

$3 + (1 + 4) = \square$

4.



$(5 + 3) + 1 = \square$

$5 + (3 + 1) = \square$

Grouping numbers to add them

What number will make each sentence true?

1.

(3 + 2) + 2 = ☐

3 + (2 + 2) = ☐

2.

(2 + 4) + 2 = ☐

2 + (4 + 2) = ☐

3.

(3 + 1) + 2 = ☐

3 + (1 + 2) = ☐

4.

(2 + 3) + 4 = ☐

2 + (3 + 4) = ☐

5.

(4 + 2) + 3 = ☐

4 + (2 + 3) = ☐

6.

(1 + 2) + 5 = ☐

1 + (2 + 5) = ☐

Can you do it?

Tell your answer without adding the numbers.
Which sign will make each sentence true?

$>$ $<$ $=$

a. (4 + 2) + 1 ○ 4 + (2 + 1)
b. (2 + 1) + 3 ○ 5 + (1 + 3)
c. (0 + 4) + 5 ○ 3 + (4 + 1)

Finding the sum of three numbers

Add down, then up. Start with the red numerals.

1.
$$\begin{array}{r} 2 \\ 3 \\ +\ 4 \\ \hline \square \end{array} \qquad \begin{array}{r} 2 \\ 3 \\ +\ 4 \\ \hline \square \end{array}$$

2.
$$\begin{array}{r} 3 \\ 2 \\ +\ 3 \\ \hline \square \end{array} \qquad \begin{array}{r} 3 \\ 2 \\ +\ 3 \\ \hline \square \end{array}$$

3.
$$\begin{array}{r} 1 \\ 5 \\ +\ 2 \\ \hline \square \end{array} \qquad \begin{array}{r} 1 \\ 5 \\ +\ 2 \\ \hline \square \end{array}$$

4.
$$\begin{array}{r} 4 \\ 2 \\ +\ 3 \\ \hline \square \end{array} \qquad \begin{array}{r} 4 \\ 2 \\ +\ 3 \\ \hline \square \end{array}$$

5.
$$\begin{array}{r} 2 \\ 3 \\ +\ 1 \\ \hline \square \end{array} \qquad \begin{array}{r} 2 \\ 3 \\ +\ 1 \\ \hline \square \end{array}$$

6.
$$\begin{array}{r} 5 \\ 2 \\ +\ 2 \\ \hline \square \end{array} \qquad \begin{array}{r} 5 \\ 2 \\ +\ 2 \\ \hline \square \end{array}$$

7.
$$\begin{array}{r} 6 \\ 1 \\ +\ 1 \\ \hline \square \end{array} \qquad \begin{array}{r} 6 \\ 1 \\ +\ 1 \\ \hline \square \end{array}$$

8.
$$\begin{array}{r} 3 \\ 2 \\ +\ 2 \\ \hline \square \end{array} \qquad \begin{array}{r} 3 \\ 2 \\ +\ 2 \\ \hline \square \end{array}$$

9.
$$\begin{array}{r} 6 \\ 1 \\ +\ 2 \\ \hline \square \end{array} \qquad \begin{array}{r} 6 \\ 1 \\ +\ 2 \\ \hline \square \end{array}$$

Add down. Check by adding up.

10.
$$\begin{array}{r} 4 \\ 3 \\ +\ 1 \\ \hline \square \end{array} \qquad \begin{array}{r} 5 \\ 1 \\ +\ 3 \\ \hline \square \end{array} \qquad \begin{array}{r} 2 \\ 3 \\ +\ 5 \\ \hline \square \end{array} \qquad \begin{array}{r} 4 \\ 4 \\ +\ 1 \\ \hline \square \end{array} \qquad \begin{array}{r} 2 \\ 2 \\ +\ 4 \\ \hline \square \end{array} \qquad \begin{array}{r} 2 \\ 7 \\ +\ 1 \\ \hline \square \end{array}$$

11.
$$\begin{array}{r} 0 \\ 6 \\ +\ 3 \\ \hline \square \end{array} \qquad \begin{array}{r} 3 \\ 4 \\ +\ 0 \\ \hline \square \end{array} \qquad \begin{array}{r} 2 \\ 0 \\ +\ 7 \\ \hline \square \end{array} \qquad \begin{array}{r} 0 \\ 3 \\ +\ 5 \\ \hline \square \end{array} \qquad \begin{array}{r} 5 \\ 0 \\ +\ 2 \\ \hline \square \end{array} \qquad \begin{array}{r} 5 \\ 4 \\ +\ 0 \\ \hline \square \end{array}$$

Finding the other addend

1. Here are 6 ducks.
   Some are Joe's. Some are Ann's.
   If 3 are Joe's, how many are Ann's?
   If 4 are Joe's, how many are Ann's?
   If 1 is Ann's, how many are Joe's?

2. Here are 7 boys.

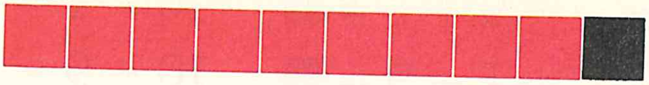
   Some can swim. Some cannot.
   If 3 can swim, how many cannot swim?
   If 2 can swim, how many cannot swim?
   If 6 cannot swim, how many can swim?
   If 7 cannot swim, how many can swim?

3. Here are 8 girls.

   Some can swim. Some cannot.
   If 1 cannot swim, how many can swim?
   If 3 cannot swim, how many can swim?
   If 2 can swim, how many cannot swim?
   If 4 can swim, how many cannot swim?

Studying facts with sums of 10

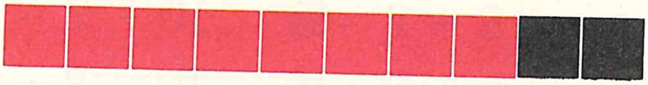
1.



10 = 9 + □

10 = 1 + △

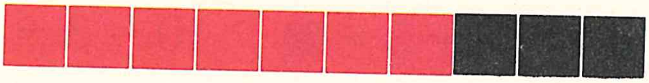
2.



10 = 8 + □

10 = 2 + △

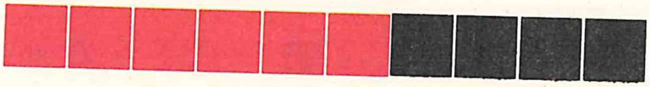
3.



10 = 7 + □

10 = 3 + △

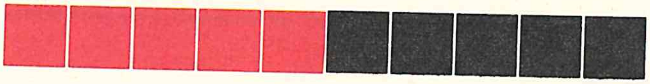
4.



10 = 6 + □

10 = 4 + △

5.



10 = 5 + □

6.

10 dots

Cover 2 dots.

10 − 2 = △

Cover 8 dots.

10 − 8 = □

7.

10 dots

Cover 3 dots.

10 − 3 = △

Cover 7 dots.

10 − 7 = □

8.

10 dots

Cover 4 dots.

10 − 4 = △

Cover 6 dots.

10 − 6 = □

9

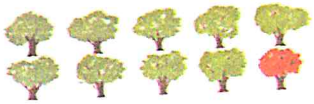
10 dots

Cover 5 dots.

10 − 5 = □

Studying related facts

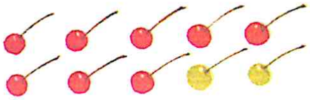
1.



9 + 1 = □ 10 − 1 = □

1 + 9 = □ 10 − 9 = □

2.



8 + 2 = □ 10 − 2 = □

2 + 8 = □ 10 − 8 = □

3.

7 + 3 = □ 10 − 3 = □

3 + 7 = □ 10 − 7 = □

4.

6 + 4 = □ 10 − 4 = □

4 + 6 = □ 10 − 6 = □

5.

5 + 5 = □ 10 − 5 = □

6.

3 + 7 = 10, so 7 + 3 = ■

1 + 9 = 10, so 9 + 1 = ■

8 + 2 = 10, so 2 + 8 = ■

6 + 4 = 10, so 4 + 6 = ■

7.

10 − 1 = 9, so 10 − 9 = ■

10 − 4 = 6, so 10 − 6 = ■

10 − 2 = 8, so 10 − 8 = ■

10 − 3 = 7, so 10 − 7 = ■

8. (2 + 5) + 3 = ▲ + 3 2 + (5 + 3) = 2 + ▲

7 + 3 = ■ 2 + 8 = ■

Making number sentences true

1. Bill wants 10 balloons. He can buy:

6 blue, ? red
3 green, ? blue
1 blue, ? red
2 red, ? blue
5 green, ? blue

2 red, 2 green, ? blue
4 green, 4 red, ? blue

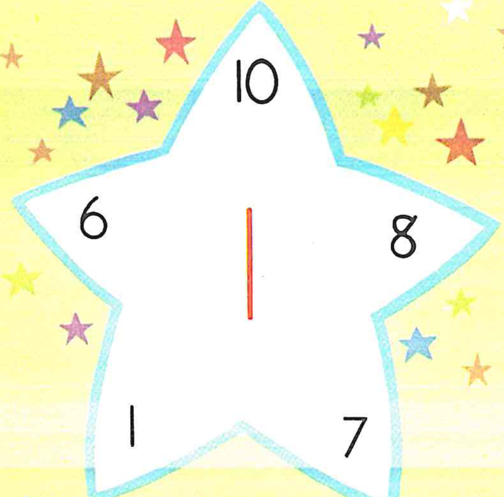
5 green, 4 red, ? blue
4 blue, 6 red, ? green

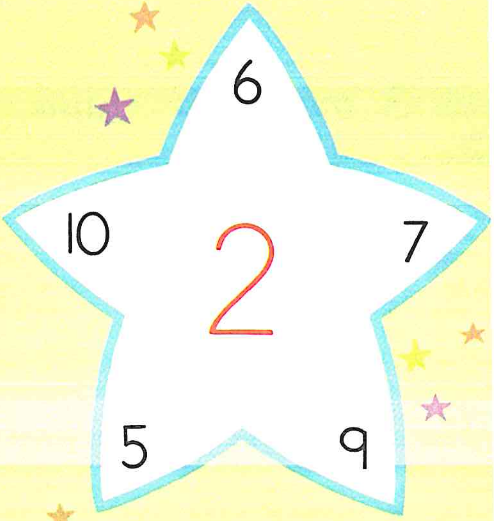
2. $5 + 3 + 2 = \square$
3. $4 + 2 + 3 = \square$
4. $3 + 4 + 3 = \square$
5. $2 + 3 + 5 = \square$
6. $5 + 2 + 1 = \square$
7. $4 + 5 + 1 = \square$
8. $6 + 0 + 4 = \square$
9. $8 + 1 + 1 = \square$
10. $3 + 3 + 3 = \square$

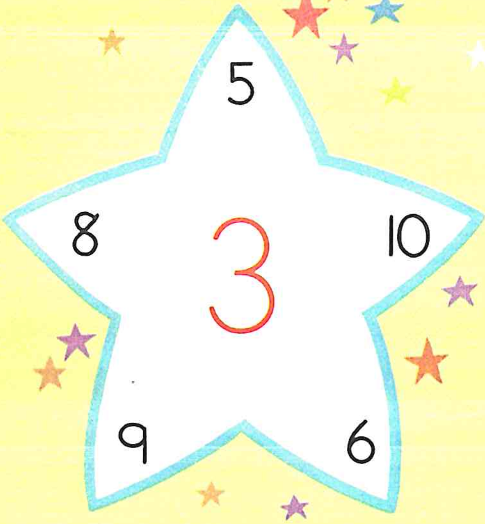
11. Use >, or <, or = to make true sentences.

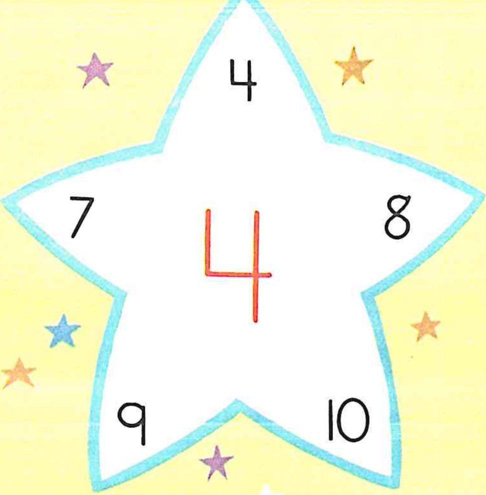
10 ● 5 + 6
10 ● 7 + 3
10 ● 2 + 6
10 ● 3 + 6
10 ● 5 + 4
10 ● 4 + 6
10 ● 2 + 8
10 ● 6 + 6

Fun with numbers





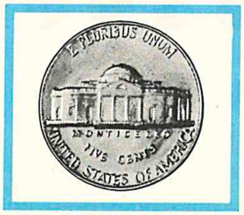




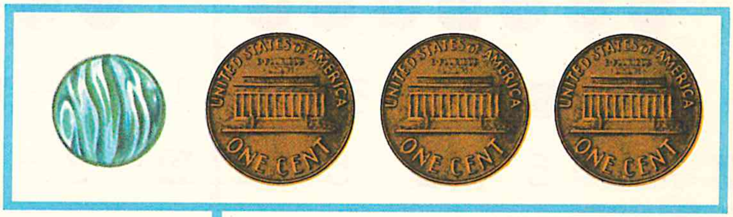
Getting change from a nickel or a dime

1. Jim has a nickel. He buys a marble for 2¢.
Jim thinks, "5 − 2 = 3. I'll get 3¢ change."
What coins does Jim get in change?

Jim gives:



Jim gets:



2.

Tom buys for 3¢.
He gives a nickel.
5 − 3 = ■ Change: ? ¢.

3.

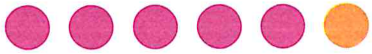
Jane buys for 9¢.
She gives a dime.
10 − 9 = ■ Change: ? ¢.

Each child has a dime.

4. Jane spends 6¢. → Her change is ? ¢.
5. Bill spends 5¢. → His change is ? ¢.
6. Mary spends 10¢. → Her change is ? ¢.
7. Jack spends 4¢. → His change is ? ¢.
8. Jean spends 7¢. → Her change is ? ¢.

Making number sentences true

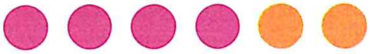
1.



5 + 1 = 6　　1 + 5 = 6

■ − 1 = 5　　■ − 5 = 1

2.



4 + 2 = ■　　2 + 4 = ■

■ − 2 = 4　　■ − 4 = 2

3.

5 + 2 = ■　　2 + 5 = ■

■ − 2 = 5　　■ − 5 = 2

4.

4 + 3 = ■　　3 + 4 = ■

■ − 3 = 4　　■ − 4 = 3

What number will make each sentence true?

5.

□ − 1 = 6

□ − 3 = 3

□ − 4 = 0

6.

□ − 5 = 3

□ − 1 = 9

□ − 7 = 2

7.

□ − 2 = 8

□ − 5 = 4

□ − 2 = 6

8.

□ − 8 = 1

□ − 6 = 4

□ − 3 = 5

9.

□ − 7 = 3

□ − 4 = 4

□ − 3 = 6

10.

□ − 1 = 7

□ − 5 = 5

□ − 0 = 6

Which number pairs will make true sentences?

11. ▲ + □ = 10

7, 3	2, 6	1, 8
2, 8	9, 1	4, 6

12. ▲ − □ = 4

7, 4	10, 6	9, 5
8, 4	6, 3	7, 3

Making number sentences true

1.

5 − 2 = 3

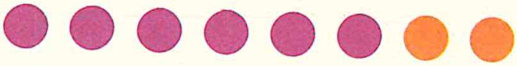
■ + 2 = 5   2 + ■ = 5

2.

5 − 3 = 2

▲ + 3 = 5   3 + ▲ = 5

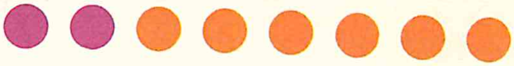
3.



8 − 2 = 6

■ + 2 = 8   2 + ■ = 8

4.



8 − 6 = 2

▲ + 6 = 8   6 + ▲ = 8

What number will make each sentence true?

5.
🟧 + 3 = 6
🟧 + 1 = 7
🟧 + 5 = 5

6.
🟧 + 3 = 8
🟧 + 1 = 10
🟧 + 2 = 9

7.
🟧 + 2 = 10
🟧 + 6 = 8
🟧 + 5 = 9

8.
8 + 🟧 = 9
6 + 🟧 = 10
5 + 🟧 = 8

9.
7 + 🟧 = 10
4 + 🟧 = 8
6 + 🟧 = 9

10.
7 + 🟧 = 8
5 + 🟧 = 5
6 + 🟧 = 6

Which number pairs will make true sentences?

11. 🔺 + 🟦 = 9

6, 4
7, 2

5, 4
1, 7

6, 3
8, 1

12. 🔺 − 🟦 = 3

9, 3
8, 5

10, 7
9, 4

7, 4
6, 3

Pairs of whole numbers

1. What pairs of whole numbers will make the sentence true? The first number of each pair is named for you.

△ + □ = 6

△	6	5	4	3	2	1	0
□	?	?	?	?	?	?	?

2. What pairs of whole numbers, not greater than 10, will make the sentence true? The first number of each pair is named.

△ − □ = 5

△	10	9	8	7	6	5
□	?	?	?	?	?	?

3. What pairs of whole numbers will make each sentence true?
Make a table for each sentence.

a. △ + □ = 10
b. △ + □ = 9
c. △ + □ = 8
d. △ + □ = 7

4. What pairs of whole numbers, not greater than 10, will make each sentence true?
Make a table for each sentence.

a. △ − □ = 1
b. △ − □ = 2
c. △ − □ = 3
d. △ − □ = 4

Test on addition facts

1.	2	3	0	5	1	8	4
	+ 2	+ 6	+ 1	+ 3	+ 6	+ 2	+ 5
	🟩	🟩	🟩	🟩	🟩	🟩	🟩
2.	1	3	8	2	6	2	7
	+ 9	+ 4	+ 1	+ 3	+ 4	+ 5	+ 1
	🟩	🟩	🟩	🟩	🟩	🟩	🟩
3.	4	5	2	1	7	1	4
	+ 3	+ 0	+ 6	+ 3	+ 2	+ 1	+ 6
	🟩	🟩	🟩	🟩	🟩	🟩	🟩
4.	2	9	4	3	0	2	5
	+ 4	+ 1	+ 4	+ 7	+ 9	+ 1	+ 5
	🟩	🟩	🟩	🟩	🟩	🟩	🟩
5.	3	4	2	5	1	6	5
	+ 5	+ 0	+ 8	+ 4	+ 4	+ 3	+ 2
	🟩	🟩	🟩	🟩	🟩	🟩	🟩
6.	3	2	3	1	6	7	4
	+ 3	+ 7	+ 2	+ 5	+ 2	+ 3	+ 2
	🟩	🟩	🟩	🟩	🟩	🟩	🟩

Copy and complete each sentence.

1. 80 + 5 = 🟥 40 + 1 = 🟥 70 + 8 = 🟥

2. 10 + 7 = 🟥 60 + 2 = 🟥 90 + 6 = 🟥

3. 2 + 3 + 4 = 🟥 2 + 2 + 6 = 🟥 3 + 2 + 5 = 🟥

Test on subtraction facts

1.	4	9	1	8	7	10	9
	− 2	− 6	− 1	− 3	− 6	− 2	− 5
	🟩	🟩	🟩	🟩	🟩	🟩	🟩
2.	10	7	9	5	10	7	8
	− 9	− 4	− 1	− 3	− 4	− 5	− 1
	🟩	🟩	🟩	🟩	🟩	🟩	🟩
3.	7	5	8	4	9	2	10
	− 3	− 0	− 6	− 3	− 2	− 1	− 6
	🟩	🟩	🟩	🟩	🟩	🟩	🟩
4.	6	10	8	10	9	3	10
	− 4	− 1	− 4	− 7	− 9	− 1	− 5
	🟩	🟩	🟩	🟩	🟩	🟩	🟩
5.	8	4	10	9	5	9	7
	− 5	− 0	− 8	− 4	− 1	− 3	− 2
	🟩	🟩	🟩	🟩	🟩	🟩	🟩
6.	6	9	5	6	8	10	6
	− 3	− 7	− 2	− 5	− 2	− 3	− 2
	🟩	🟩	🟩	🟩	🟩	🟩	🟩

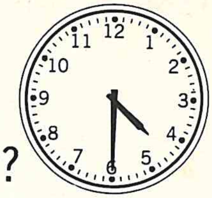
Which sign will make each sentence true?

$>$ $<$ $=$

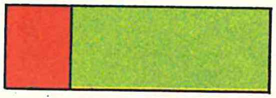
1. 9 − 4 ● 5
10 − 7 ● 2
8 − 8 ● 8

2. 20 + 40 ● 50
23 + 1 ● 25
16 + 2 ● 18

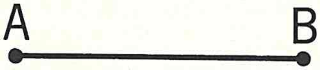
Review

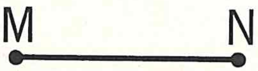


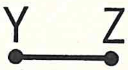
1. Is today Tuesday?
2. Does this clock show quarter past four?
3. Will 2 nickels buy as much as a dime?
4. Is one half of this block red?



5. Will a quart bottle hold as much milk as 3 pint bottles?
6. Which line segment is nearest to 1 inch in length?

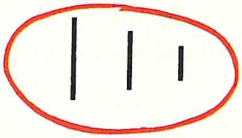




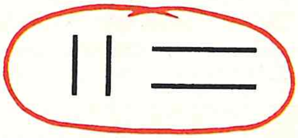


7. Which set of line segments below could be used to make a rectangle?

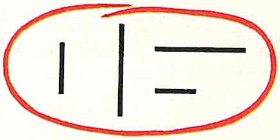
Set A



Set B



Set C

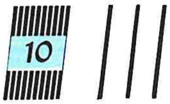
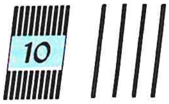
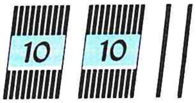
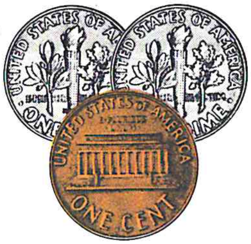
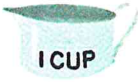
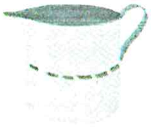
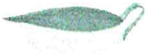
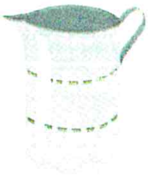
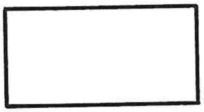


8. Write a number sentence to show how to find each answer.

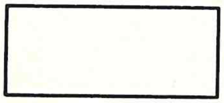
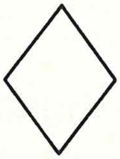
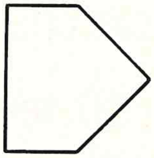
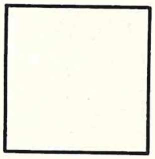
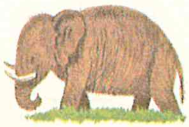
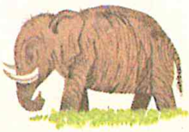
You have a nickel.
You spend 2¢.
Your change is ? .

You have a dime.
You spend 6¢.
Your change is ? .

Test 3

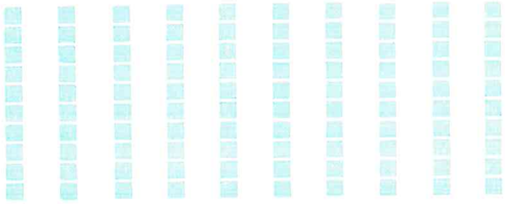
1. 14	A 	B 	C 
2.  UNITED STATES OF AMERICA ONE DIME UNITED STATES OF AMERICA ONE DIME UNITED STATES OF AMERICA ONE CENT	A	B	C
3. 3 tens 4 ones	A 31	B 43	C 34
4. 	A 	B 	C 
5. 	A 3	B 4	C 5
6. 5 + 3 = 8	A 3 + 5 = 8	B 8 − 3 = 5	C 5 − 8 = 3
7. 50 + 30 = ?	A 9 tens	B 100	C 80

Test 4

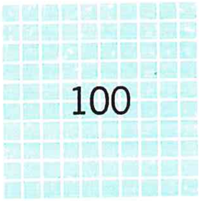
1.	A 12	B 24	C 6	D 10
2.	A 	B 	C 	D 
3.	A 25	B 17	C 26	D 23
4.	A $5 + 3 = 8$	B $5 - 3 = 2$	C $9 - 5 = 4$	D $3 + 5 = 8$
5.	A $\begin{array}{r}4\\+\,3\\\hline 7\end{array}$	B $\begin{array}{r}4\\-\,3\\\hline 1\end{array}$	C $\begin{array}{r}7\\-\,4\\\hline 3\end{array}$	D $\begin{array}{r}5\\+\,2\\\hline 7\end{array}$
6.	A May 2	B May 4	C May 10	D May 13
7.	A 	B 	C 	D

Counting by hundreds

Set A

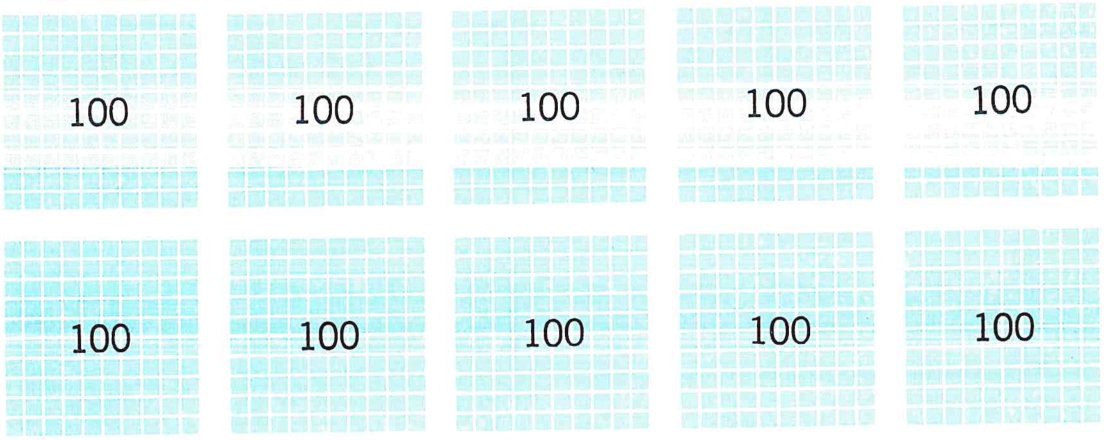


Set B



1. How many stamps in set A? in set B?

10 tens = 1 hundred



2. How many stamps in each sheet?
3. Count the stamps by hundreds.

Write the numerals as you count.

100 200 300 _?_ _?_ 600 _?_ _?_ _?_ 1000

4. How many stamps are in 1 sheet? 2 sheets?

3 sheets? 4 sheets? 5 sheets? 6 sheets?

7 sheets? 8 sheets? 9 sheets? 10 sheets?

Adding and subtracting hundreds

1.

3 ones + 2 ones = ? ones (5)

3 tens + 2 tens = ? tens (50)

3 hundreds + 2 hundreds = ? hundreds (500)

2.

4 + 3 = 🟩

40 + 30 = 🟩

400 + 300 = 🟩

3.

5 + 4 = 🟩

50 + 40 = 🟩

500 + 400 = 🟩

4.

6 + 2 = 🟩

60 + 20 = 🟩

600 + 200 = 🟩

5.

$\begin{array}{r} 3 \\ +\ 6 \\ \hline \end{array}$ 🟦 $\begin{array}{r} 30 \\ +\ 60 \\ \hline \end{array}$ 🟦 $\begin{array}{r} 300 \\ +\ 600 \\ \hline \end{array}$ 🟦

6.

$\begin{array}{r} 5 \\ +\ 2 \\ \hline \end{array}$ 🟦 $\begin{array}{r} 50 \\ +\ 20 \\ \hline \end{array}$ 🟦 $\begin{array}{r} 500 \\ +\ 200 \\ \hline \end{array}$ 🟦

7.

9 ones − 4 ones = ? ones (5)

9 tens − 4 tens = ? tens (50)

9 hundreds − 4 hundreds = ? hundreds (500)

8.

7 − 5 = 🟦

70 − 50 = 🟦

700 − 500 = 🟦

9.

9 − 6 = 🟦

90 − 60 = 🟦

900 − 600 = 🟦

10.

8 − 3 = 🟦

80 − 30 = 🟦

800 − 300 = 🟦

11.

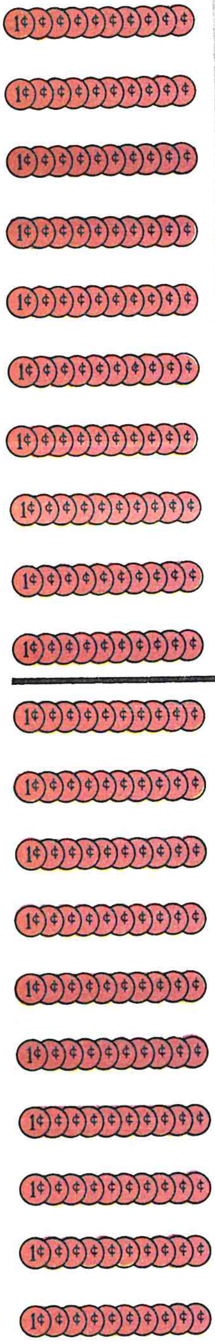
$\begin{array}{r} 9 \\ -\ 4 \\ \hline \end{array}$ 🟩 $\begin{array}{r} 90 \\ -\ 40 \\ \hline \end{array}$ 🟩 $\begin{array}{r} 900 \\ -\ 400 \\ \hline \end{array}$ 🟩

12.

$\begin{array}{r} 7 \\ -\ 3 \\ \hline \end{array}$ 🟩 $\begin{array}{r} 70 \\ -\ 30 \\ \hline \end{array}$ 🟩 $\begin{array}{r} 700 \\ -\ 300 \\ \hline \end{array}$ 🟩

Counting by tens

The picture shows a set of 10 pennies in each row.



1 ten	10
2 tens	20
3 tens	30
4 tens	40
5 tens	50
6 tens	60
7 tens	70
8 tens	80
9 tens	90
10 tens	100
11 tens	110
12 tens	120
13 tens	130
14 tens	140
15 tens	150
16 tens	160
17 tens	170
18 tens	180
19 tens	190
20 tens	200

1. How many sets of 10 pennies? Count them as shown in the gray column.

2. Count the pennies as shown in the green column.

20 tens = ? hundreds.

3.

9 tens = ?

10 tens = ?

11 tens = 10 tens + ? ten

12 tens = 10 tens + ? tens

4.

14 tens = 100 + 40 = ?

15 tens = 100 + 50 = ?

5.

170 = 100 + ?

180 = 100 + ?

190 = 100 + ?

200 = 100 + ?

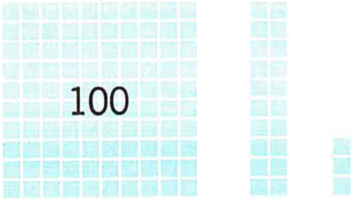
Using a numeral chart

101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200

1. Start with one hundred five.
   Count by ones to one hundred fourteen.
2. Start with one hundred ten.
   Count by tens to two hundred.
3. Start with one hundred five.
   Count by fives to two hundred.
4. Start with one hundred eighty.
   Count by twos to two hundred.

Studying hundreds, tens, and ones

1.



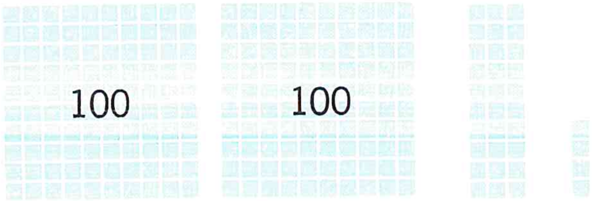
1 hundred 2 tens 3 ones

Hundreds	Tens	Ones
1	2	3

The numeral: 123

Read the numeral: One hundred twenty-three

2.

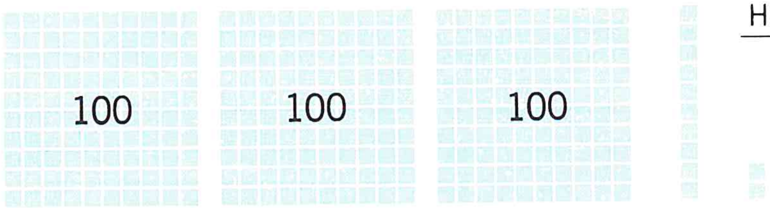


2 hundreds 3 tens 4 ones

Hundreds	Tens	Ones
2	3	4

?

3.



3 hundreds 1 ten 2 ones

Hundreds	Tens	Ones
3	1	2

?

4.

	Hundreds	Tens	Ones
127 =	1	2	7
248 =	?	?	?
363 =	?	?	?
460 =	?	?	?

	Hundreds	Tens	Ones
586 =	?	?	?
604 =	?	?	?
792 =	?	?	?
800 =	?	?	?

Writing three-digit numerals

1. Write a numeral for:

1 hundred 5 tens 3 ones
4 hundreds 4 tens 8 ones
6 hundreds 6 tens 1 one
8 hundreds 8 tens 8 ones
9 hundreds 0 tens 5 ones
3 hundreds 6 tens 0 ones

Write a numeral for the number that is:

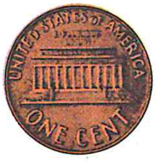
2. 1 greater than 172
1 greater than 284
1 greater than 456

10 greater than 90
10 greater than 190
10 greater than 325

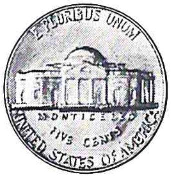
3. 1 less than 100
1 less than 150
1 less than 200
1 less than 210

10 less than 100
10 less than 150
10 less than 200
10 less than 461

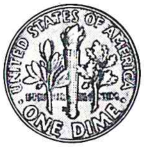
Quarter, half dollar, dollar



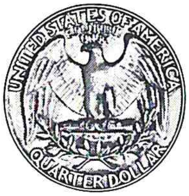
penny
1¢



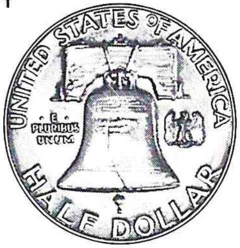
nickel
5¢



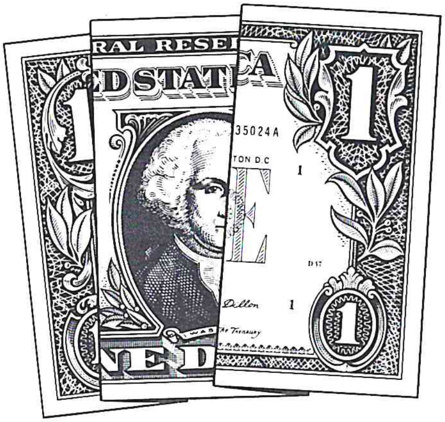
dime
10¢



quarter
25¢



half dollar
50¢



dollar
100¢ $1.00

Choose the correct answer.

1.

You pay a nickel a dime

2.

You pay a quarter a dime

3.

You pay a quarter a half dollar

4.

You pay a quarter a half dollar

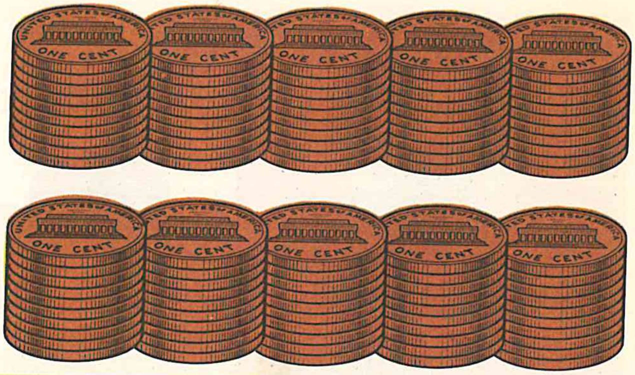
5.

You pay a half dollar a dollar

Studying the value of a dollar

1. Count the pennies by tens.

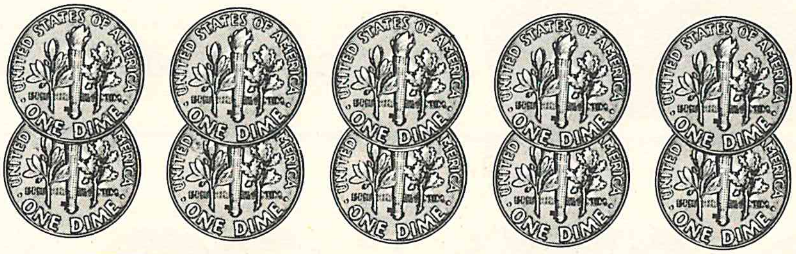
How many pennies all together?



100 pennies make 1 dollar

---

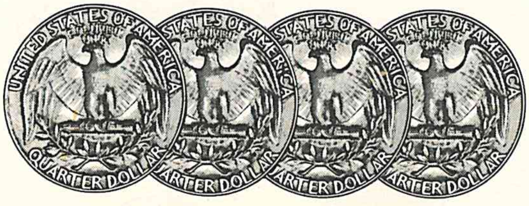
2. How many dimes?



10 dimes make 1 dollar

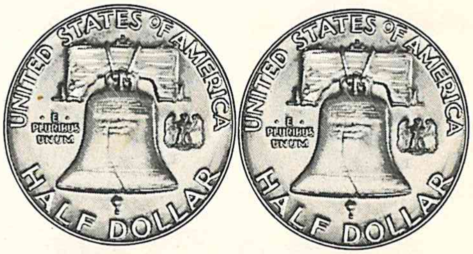
---

3. How many quarters?



4 quarters make 1 dollar

4. How many half dollars?

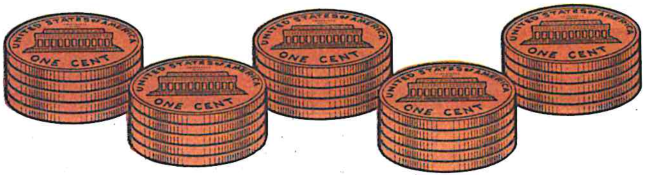


2 half dollars make 1 dollar

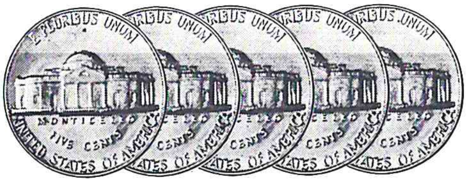
Studying the value of a quarter

a quarter
25 cents

1. Count the pennies by fives.
How many pennies?



25 pennies make 1 quarter

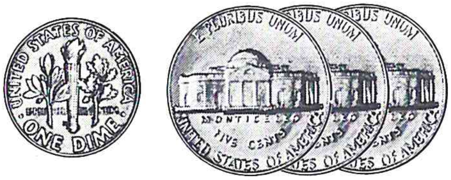


2. How many nickels?

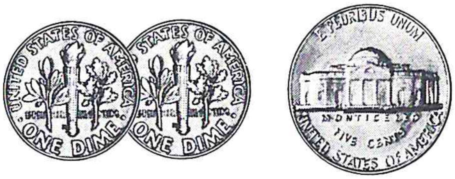
5 nickels make 1 quarter

3. How much money?

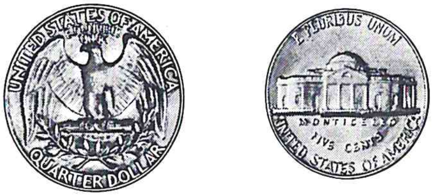
A



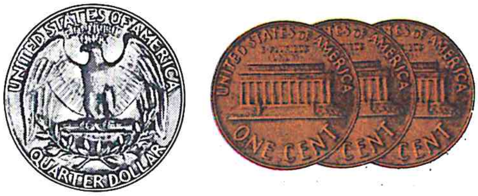
B



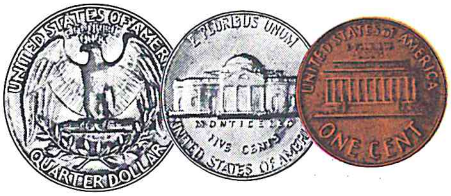
C



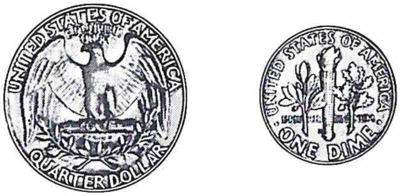
D



E



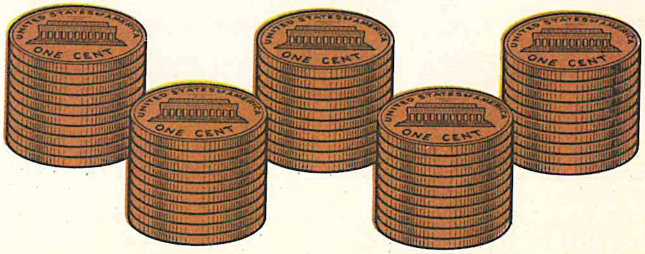
F



Studying the value of a half dollar

a half dollar
50 cents

1. Count the pennies by tens.
How many pennies?



50 pennies make 1 half dollar

2. How many quarters?

2 quarters make 1 half dollar

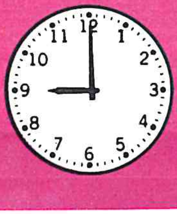
3. Who can buy a 50-cent ticket?

Ann has 1 quarter and 5 nickels.
Tom has 1 quarter and 2 dimes.
John has a half dollar and a dime.
Sue has 3 dimes and 2 nickels.

Jim has 2 quarters.
Betty has 5 dimes.

Jane has 10 nickels.
Mary has 40 pennies.

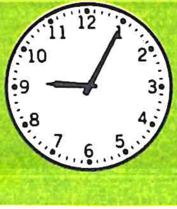
Measuring time in 5-minute intervals



1. The long hand on this clock is the minute hand.
It takes 5 minutes for the minute hand to go from 12 to 1.

How long does it take the minute hand to go

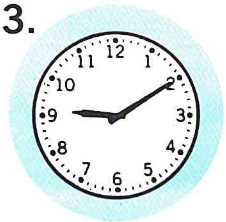
from 1 to 2? from 2 to 3? from 3 to 4?
from 12 to 2? from 12 to 3? from 12 to 4?



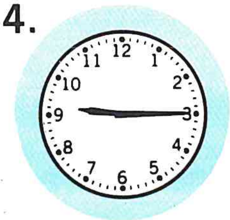
2. The short hand is the hour hand.
It has gone past 9. The minute hand has gone from 12 to 1.
Its trip took 5 minutes.
The time is 5 minutes after 9.

What time does each of these clocks show?

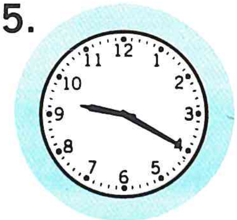
3.



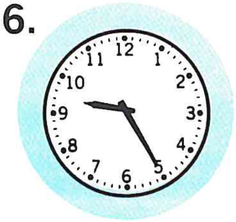
4.



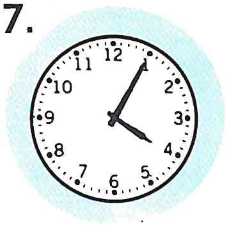
5.



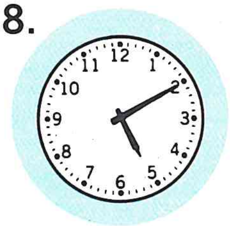
6.



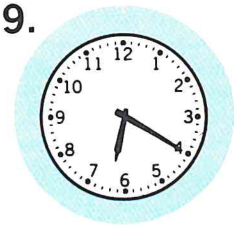
7.



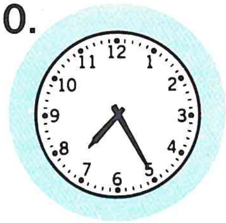
8.



9.



10.

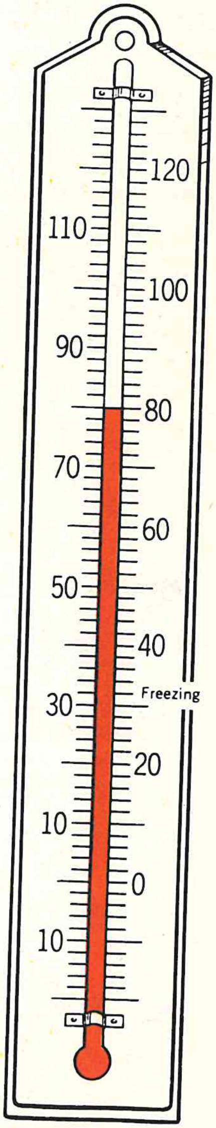


Reading a thermometer

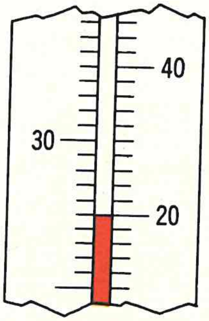
In the large picture of a thermometer, the red liquid is up to the line marked 80.

We say it shows a temperature of 80 degrees. We write 80 degrees this way: 80°

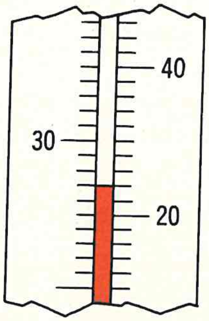
What temperatures are shown below?



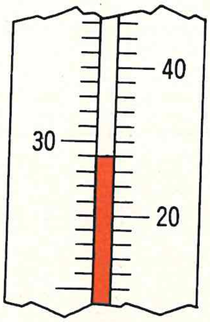
1.



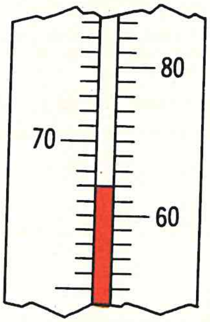
2.



3.



4.



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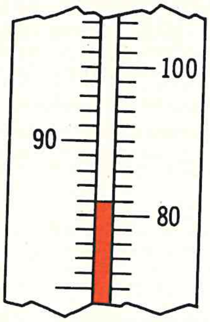

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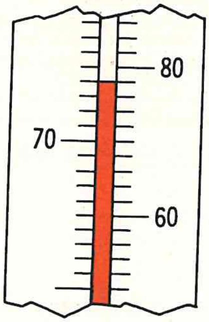

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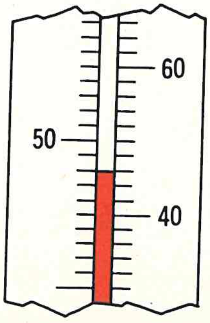

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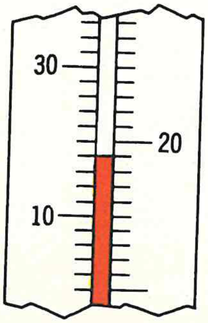
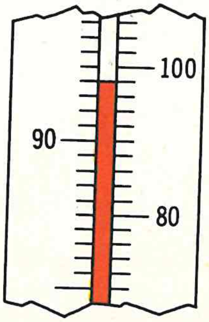
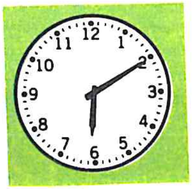


9.



Review

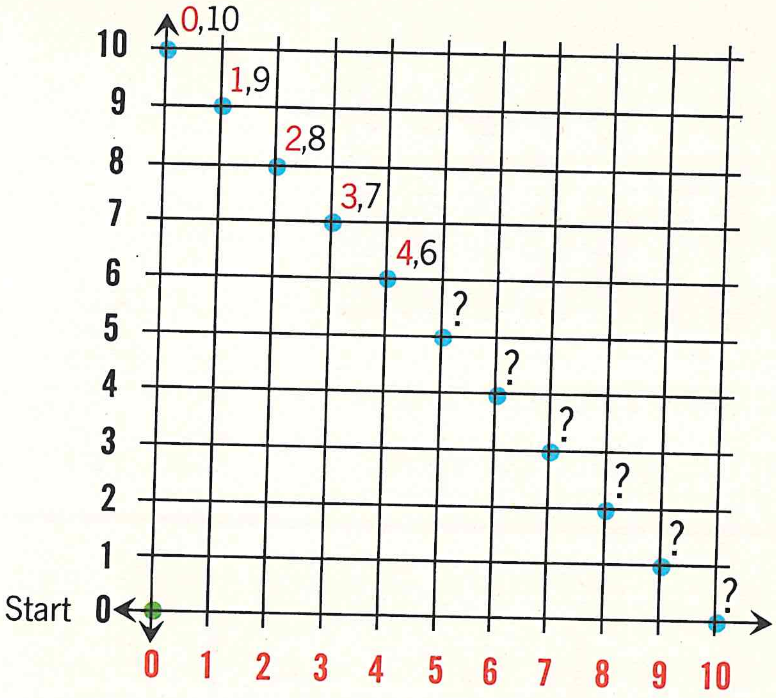
Write your answers.

1. Could you jump about as far as 3 feet?
2. Are you about 4 inches or about 4 feet tall?
3. Which is the longer time, 2 weeks or 6 days?
4. Are there 7 days in a week?
5. Which shows Joe's weight? 49 inches 49 pounds
6. Will 2 pints of water fill a quart jar?
7. One stick is 10 inches long.
   Another stick is 1 foot long.
   Are the sticks the same length?
8. Are 10 dimes worth as much as 1 dollar?
9. 

   Does this clock say half past six?
10. Does a loaf of bread weigh about 10 pounds?
11. Which buys more, 3 dimes or 1 quarter?
12. Pat's birthday is between May 15 and May 18.

    Is Pat's birthday May 17 or is it May 13?

Locating points

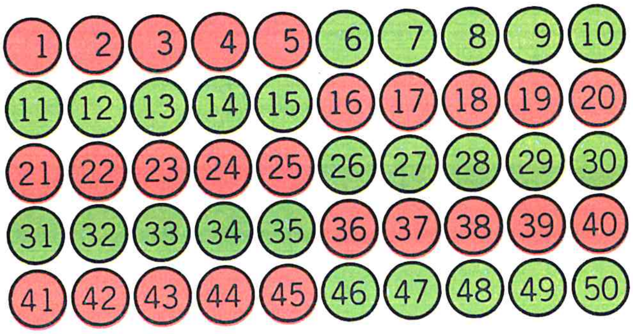


Some children will march for a school program.
The green dot shows where they start.
The red numerals show steps in one direction.
The black numerals show steps in another direction.
The blue dots show where each child will stand.

1. How many steps is it to point 0,10? point 1,9? point 2,8?
2. Make a table to show the number of steps to each blue dot. Look for a pattern in your table.

Right	Up	Sum
0	10	?
1	9	?
2	?	?

Using basic facts in addition



1. How many disks in 1 row? in 2 rows? in 3 rows? 4 rows? 5 rows?

30 + 20 = □
10 + 5 = □
10 + 2 = □

2. Count the disks by fives.
3. Count the disks by twos.

Use the set of disks above if you need help.

4. 4 + 2 = △
14 + 2 = △
24 + 2 = △
34 + 2 = △

5. 6 + 2 = △
16 + 2 = △
26 + 2 = △
36 + 2 = △

6. 8 + 2 = △
18 + 2 = △
28 + 2 = △
38 + 2 = △

7. 5 + 3 = 8, so 25 + 3 = □
8. 4 + 5 = 9, so 34 + 5 = □
9. 2 + 5 = 7, so 42 + 5 = □
10. 3 + 4 = 7, so 53 + 4 = □
11. 6 + 3 = 9, so 76 + 3 = □
12. 2 + 6 = 8, so 92 + 6 = □

Estimating answers

Read the sentence in the colored box.
Then use > or < to make each sentence true.

1.
40 + 20 = 60
41 + 22 ● 60
45 + 23 ● 60

2.
50 + 30 = 80
52 + 31 ● 80
50 + 29 ● 80

3.
30 + 40 = 70
35 + 43 ● 70
28 + 40 ● 70

4.
20 + 70 = 90
24 + 73 ● 90
25 + 71 ● 90

5.
40 + 50 = 90
39 + 50 ● 90
40 + 49 ● 90

6.
30 + 30 = 60
29 + 30 ● 60
30 + 34 ● 60

7.
30 − 10 = 20
30 − 11 ● 20
30 − 15 ● 20

8.
50 − 20 = 30
51 − 20 ● 30
50 − 19 ● 30

9.
70 − 30 = 40
70 − 31 ● 40
71 − 30 ● 40

10.
90 − 40 = 50
90 − 43 ● 50
90 − 39 ● 50

Adding tens and ones

Sue made 14 white cookies.
She made 12 brown cookies.
Did she make more than 20 cookies in all?

Is this number sentence true? $14 + 12 > 20$

What is the sum of 14 and 12? $14 + 12 = \square$

$$\begin{array}{rl} 14 = & 1 \text{ ten} \quad 4 \text{ ones} \\ +\ 12 = & 1 \text{ ten} \quad 2 \text{ ones} \\ \hline & \underline{\ ?\ } \text{ tens } \underline{\ ?\ } \text{ ones, or } \underline{\ ?\ } \end{array}$$

Add the ones. Add the tens.
The sum is 2 tens 6 ones, or ?
Sue made ? cookies.

Copy. Add the ones, then the tens.

1.	43 + 25	73 + 14	62 + 24	85 + 14	12 + 73	27 + 62
2.	33 + 66	45 + 42	35 + 60	42 + 35	50 + 40	40 + 34

3. What number is:

34 greater than 35? 25 greater than 52?

Adding tens and ones

1. Mark had 32¢. He earned 13¢ more.
How much money has he now?

$$\begin{array}{r} 32 \\ +\ 13 \\ \hline \end{array}$$

2. Jane had 10 jacks. She got 15 more.
How many had she then?

$$\begin{array}{r} 10 \\ +\ 15 \\ \hline \end{array}$$

3. Ed has 34 blocks. Sue has 23 blocks.
How many blocks have both children?

$$\begin{array}{r} 34 \\ +\ 23 \\ \hline \end{array}$$

4. Joe played his drum 30 minutes.
Then he played it 30 minutes more.
How many minutes did he play?

$$\begin{array}{r} 30 \\ +\ 30 \\ \hline \end{array}$$

Add the ones. Then add the tens.

5. $\begin{array}{r} 24 \\ +\ 53 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 34 \\ +\ 64 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 15 \\ +\ 82 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 34 \\ +\ 52 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 28 \\ +\ 11 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 11 \\ +\ 76 \\ \hline \end{array}$

6. $\begin{array}{r} 37 \\ +\ 42 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 40 \\ +\ 50 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 66 \\ +\ 32 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 15 \\ +\ 54 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 72 \\ +\ 14 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 24 \\ +\ 70 \\ \hline \end{array}$

7. $\begin{array}{r} 62 \\ +\ 36 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 25 \\ +\ 22 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 40 \\ +\ 53 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 45 \\ +\ 33 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 32 \\ +\ 65 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 57 \\ +\ 31 \\ \hline \end{array}$

Subtracting tens and ones

Sam found 48 shells.
He threw away 16.
Did he have as many as 30 shells left?

Is this number sentence true? $48 - 16 > 30$

Subtract 16 from 48. $48 - 16 = \square$

$$\begin{array}{rcll} 48 & = & 4 \text{ tens} & 8 \text{ ones} \\ -\ 16 & = & 1 \text{ ten} & 6 \text{ ones} \\ \hline & & \underline{\ ?\ } \text{ tens} & \underline{\ ?\ } \text{ ones, or } \underline{\ ?\ } \end{array}$$

Subtract the ones. Subtract the tens.
Sam had $\underline{\ ?\ }$ shells left.

Copy. Subtract ones from ones and tens from tens.

1.

$$\begin{array}{rrrrrr} 86 & 79 & 80 & 79 & 97 & 59 \\ -\ 54 & -\ 29 & -\ 70 & -\ 42 & -\ 35 & -\ 24 \\ \hline \end{array}$$

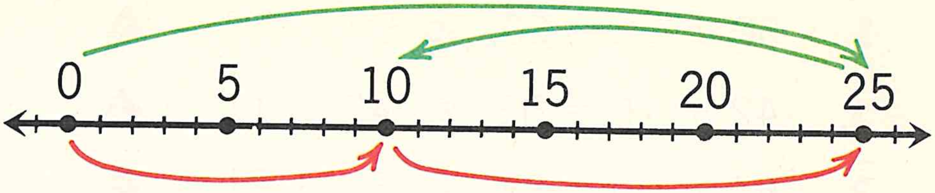
2.

$$\begin{array}{rrrrrr} 89 & 68 & 89 & 79 & 93 & 98 \\ -\ 15 & -\ 23 & -\ 28 & -\ 36 & -\ 73 & -\ 46 \\ \hline \end{array}$$

3. Linda wants a 45-cent doll. She has 32¢.

How much more money does she need?

Checking subtraction



1. The green arrows show that 25 − 15 = 🟦.

The red arrows show that 🟥 + 15 = 25.

$$\begin{array}{r} 25 \\ -\,15 \\ \hline 10 \end{array}$$

Check by adding:

$$\begin{array}{r} 10 \\ +\,15 \\ \hline 25 \end{array}$$

2.

$$\begin{array}{r} 75 \\ -\,42 \\ \hline \square \end{array}$$

Check

$$\begin{array}{r} \square \\ +\,42 \\ \hline 75 \end{array}$$

3.

$$\begin{array}{r} 69 \\ -\,26 \\ \hline \square \end{array}$$

Check

$$\begin{array}{r} \square \\ +\,26 \\ \hline 69 \end{array}$$

Copy. Find the answers. Then check by adding.

4.

$$\begin{array}{r} 98 \\ -\,34 \\ \hline \end{array} \qquad \begin{array}{r} 86 \\ -\,52 \\ \hline \end{array} \qquad \begin{array}{r} 79 \\ -\,59 \\ \hline \end{array} \qquad \begin{array}{r} 78 \\ -\,41 \\ \hline \end{array} \qquad \begin{array}{r} 97 \\ -\,72 \\ \hline \end{array}$$

5.

$$\begin{array}{r} 99 \\ -\,78 \\ \hline \end{array} \qquad \begin{array}{r} 97 \\ -\,43 \\ \hline \end{array} \qquad \begin{array}{r} 93 \\ -\,61 \\ \hline \end{array} \qquad \begin{array}{r} 78 \\ -\,66 \\ \hline \end{array} \qquad \begin{array}{r} 94 \\ -\,71 \\ \hline \end{array}$$

6. Joe can find only 27 cards. He had 39.

How many cards has he lost?

Thinking about numbers

1. $50 + 10 = 60$, so $50 + 12 =$ △

2. $42 + 10 = 52$, so $42 + 11 =$ △

3. $64 + 20 = 84$, so $64 + 21 =$ △

4. $20 + 20 = 40$, so $19 + 20 =$ △

---

5. $40 - 10 = 30$, so $40 - 11 =$ △

6. $50 - 10 = 40$, so $50 - 12 =$ △

7. $60 - 30 = 30$, so $60 - 31 =$ △

8. $60 - 30 = 30$, so $60 - 29 =$ △

---

9. $26 + 33 = 59$, so $59 - 33 =$ △

10. $72 + 14 = 86$, so $86 - 72 =$ △

11. $90 - 27 = 63$, so $90 - 63 =$ △

12. $60 - 24 = 36$, so $36 + 24 =$ △

---

13. Use $32 + 37 = 69$ to find the answers.

$$\begin{array}{r} 37 \\ +\,32 \\ \hline \end{array} \qquad \begin{array}{r} 69 \\ -\,37 \\ \hline \end{array} \qquad \begin{array}{r} 69 \\ -\,32 \\ \hline \end{array} \qquad \begin{array}{r} 32 \\ +\,38 \\ \hline \end{array} \qquad \begin{array}{r} 33 \\ +\,37 \\ \hline \end{array} \qquad \begin{array}{r} 69 \\ -\,38 \\ \hline \end{array}$$

Adding hundreds, tens, and ones

1. In Oak Lane School there are 135 girls. There are 213 boys.

- Are there more than 300 children in all?
- How would you find the number of children in Oak Lane School?

2. Two ways to find the sum of 135 and 213:

A Long Way

$$\begin{array}{rclll} 135 & = & 1 \text{ hundred} & 3 \text{ tens} & 5 \text{ ones} \\ +213 & = & 2 \text{ hundreds} & 1 \text{ ten} & 3 \text{ ones} \\ \cline{1-1} \cline{3-5} & & 3 \text{ hundreds} & 4 \text{ tens} & 8 \text{ ones, or } 348 \end{array}$$

A Short Way

$$\begin{array}{r} 135 \\ +\ 213 \\ \hline 348 \end{array}$$

▶ There are __?__ children in Oak Lane School.

Find the sums.

3.

$$\begin{array}{r} 256 \\ +\ 601 \\ \hline \end{array} \qquad \begin{array}{r} 150 \\ +\ 430 \\ \hline \end{array} \qquad \begin{array}{r} 487 \\ +\ 412 \\ \hline \end{array} \qquad \begin{array}{r} 253 \\ +\ 124 \\ \hline \end{array}$$

4.

$$\begin{array}{r} 421 \\ +\ 355 \\ \hline \end{array} \qquad \begin{array}{r} 230 \\ +\ 347 \\ \hline \end{array} \qquad \begin{array}{r} 257 \\ +\ 541 \\ \hline \end{array} \qquad \begin{array}{r} 542 \\ +\ 126 \\ \hline \end{array}$$

5.

$$\begin{array}{r} 439 \\ +\ \ 60 \\ \hline \end{array} \qquad \begin{array}{r} 356 \\ +\ \ 42 \\ \hline \end{array} \qquad \begin{array}{r} 513 \\ +\ \ 14 \\ \hline \end{array} \qquad \begin{array}{r} 240 \\ +\ \ 52 \\ \hline \end{array}$$

Subtracting hundreds, tens, and ones

1. Sue's book has 235 pages.
   She has read 120 pages.
   - Does Sue still have about 100 pages, or about 200 pages to read?
   - How would you find the number of pages she still has to read?

2. Two ways to subtract 120 from 235:

A Long Way

235 =	2 hundreds	3 tens	5 ones
− 120 =	1 hundred	2 tens	0 ones
	1 hundred	1 ten	5 ones, or 115

A Short Way

$$\begin{array}{r} 235 \\ -\,120 \\ \hline 115 \end{array}$$

Check

$$\begin{array}{r} 115 \\ +\,120 \\ \hline 235 \end{array}$$

➧ Sue has __?__ more pages to read.

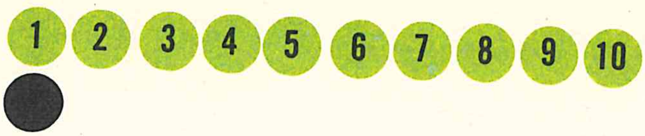
Find the answers. Then check by adding.

3. $$\begin{array}{r} 463 \\ -\,132 \\ \hline \end{array} \qquad \begin{array}{r} 874 \\ -\,430 \\ \hline \end{array} \qquad \begin{array}{r} 968 \\ -\,425 \\ \hline \end{array} \qquad \begin{array}{r} 674 \\ -\,124 \\ \hline \end{array}$$

---

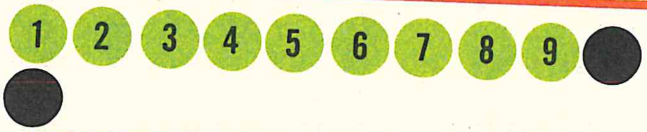
4. $$\begin{array}{r} 782 \\ -\,421 \\ \hline \end{array} \qquad \begin{array}{r} 869 \\ -\,706 \\ \hline \end{array} \qquad \begin{array}{r} 506 \\ -\,304 \\ \hline \end{array} \qquad \begin{array}{r} 270 \\ -\,250 \\ \hline \end{array}$$

Studying facts with sums of 11

1. 

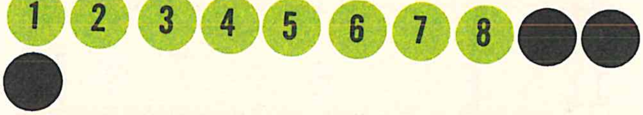
How many disks all together?

? green disks
? black disk
$10 + 1 = \square$

2. 

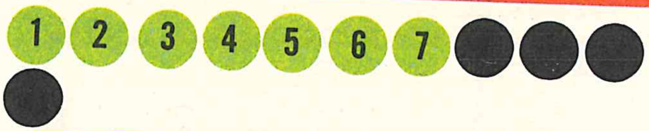
$9 + 2 = (9 + 1) + 1$
$10 \quad + 1 = \triangle$

$9 + 2 = \square$
$2 + 9 = \square$
$11 - 2 = \square$
$11 - 9 = \square$

3. 

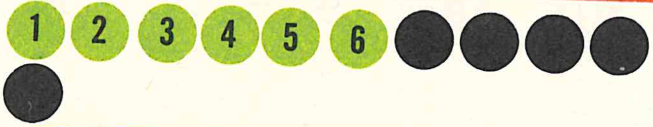
$8 + 3 = (8 + 2) + 1$
$10 \quad + 1 = \triangle$

$8 + 3 = \square$
$3 + 8 = \square$
$11 - 3 = \square$
$11 - 8 = \square$

4. 

$7 + 4 = (7 + 3) + 1$
$10 \quad + 1 = \triangle$

$7 + 4 = \square$
$4 + 7 = \square$
$11 - 4 = \square$
$11 - 7 = \square$

5. 

$6 + 5 = (6 + 4) + 1$
$10 \quad + 1 = \triangle$

$6 + 5 = \square$
$5 + 6 = \square$
$11 - 5 = \square$
$11 - 6 = \square$

Studying equalities and inequalities

Use >, <, or = to make each sentence true.

1.
7 + 4 ● 10
9 + 2 ● 11
6 + 4 ● 11
11 − 5 ● 5

2.
8 + 2 ● 10
7 + 3 ● 11
11 − 2 ● 9
11 − 4 ● 8

3.
9 + 1 ● 11
7 + 4 ● 9
8 + 3 ● 11
11 − 2 ● 8

4.
3 + 7 ● 11
11 − 9 ● 3
6 + 7 ● 11
11 − 3 ● 8

5.
6 + 6 ● 11
7 + 4 ● 11
11 − 6 ● 5
8 + 4 ● 11

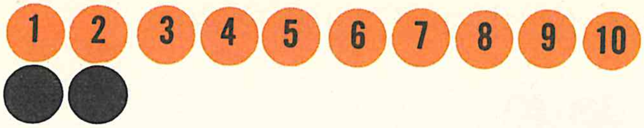
6.
11 − 4 ● 7
5 + 7 ● 11
11 − 2 ● 10
9 + 3 ● 11

7.
6 + 4 ● 10
6 + 5 ● 11
8 + 5 ● 11
11 − 9 ● 1

8.
9 + 5 ● 11
11 − 5 ● 6
11 − 8 ● 4
12 − 2 ● 10

Studying facts with sums of 12

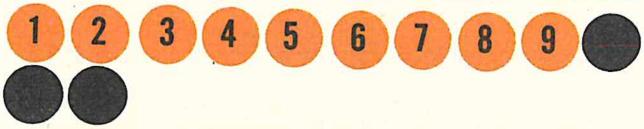
1.



How many disks all together?

? orange disks
? black disks
10 + 2 = □

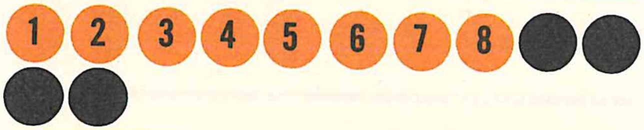
2.



9 + 3 = (9 + 1) + 2
10 + 2 = △

9 + 3 = □
3 + 9 = □
12 − 3 = □
12 − 9 = □

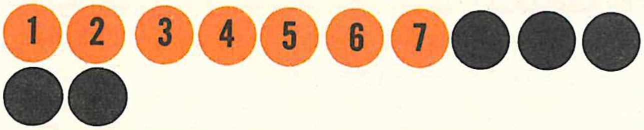
3.



8 + 4 = (8 + 2) + 2
10 + 2 = △

8 + 4 = □
4 + 8 = □
12 − 4 = □
12 − 8 = □

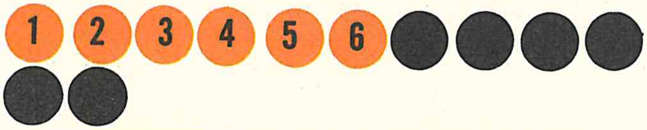
4.



7 + 5 = (7 + 3) + 2
10 + 2 = △

7 + 5 = □
5 + 7 = □
12 − 5 = □
12 − 7 = □

5.



6 + 6 = (6 + 4) + 2
10 + 2 = △

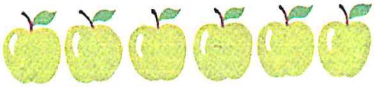
6 + 6 = □

12 − 6 = □

A dozen is 12

1. Here is a dozen apples. Count them.

A half dozen



A half dozen

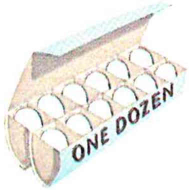
How many apples in one dozen?

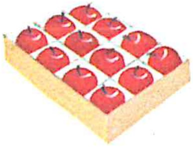
How many apples in a half dozen?

2. A dozen eggs is _?_ eggs.

A half dozen eggs is _?_ eggs.

3. Write yes or no to answer the questions.





a. Is a dozen 6 + 6?

b. Is a dozen 2 + 2 + 2 + 2 + 2 + 2?

c. Is a dozen 2 sixes?

d. Is a dozen 6 twos?

e. Is a dozen 2 + 6?

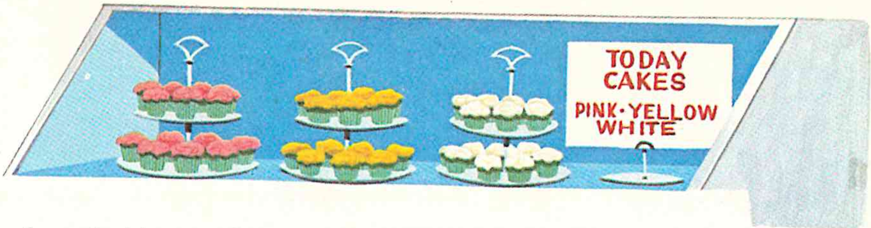
f. Is a dozen 4 + 4 + 4?

g. Is a dozen 3 + 3 + 3 + 3?

h. Is a dozen 3 + 4?

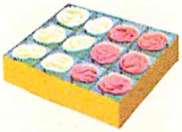
i. Is a dozen 3 fours? 4 threes?

Using facts with sums of 12



1. Look at the picture. What colors are the cakes?

2. Susan bought one dozen cakes.



How many white cakes did she buy?
How many pink cakes did she buy?

12 = ■ + ■ 2 sixes = ■

How many more to make a dozen?

3.	6 white ■ pink	7 white ■ pink	8 white ■ pink	9 white ■ pink
4.	5 white 5 pink ■ yellow	4 white 2 pink ■ yellow	1 white 2 pink ■ yellow	2 white 3 pink ■ yellow

Make true number sentences.

5. 7 + ▲ = 12
8 + ▲ = 12
▲ + 9 = 12
5 + ▲ = 12

6. 12 = 4 + ▲
12 = 9 + ▲
12 − 5 = ▲
12 − 4 = ▲

7. ▲ − 6 = 6
▲ − 8 = 4
▲ − 7 = 5
▲ − 9 = 3

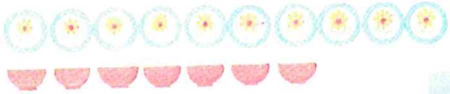
Finding the difference

1. Nancy has 7 dolls. She has 5 chairs.
Has she more dolls than chairs?
How many more? 7 − 5 = □

$\begin{array}{r} 7 \\ -\ 5 \\ \hline \square \end{array}$

---

2. Nancy has 10 plates.
She has 7 bowls.
Has she more plates than bowls?
How many more? 10 − 7 = □



$\begin{array}{r} 10 \\ -\ 7 \\ \hline \square \end{array}$

---

3. Nancy has 8 straws.
She has 12 glasses.
Has she fewer straws than glasses?
How many fewer? 12 − 8 = □

$\begin{array}{r} 12 \\ -\ 8 \\ \hline \square \end{array}$

Find the difference:

4. between 9 and 4. ⟶ 9 − 4 = □
5. between 7 and 2. ⟶ 7 − 2 = □
6. between 12 and 9. ⟶ 12 − 9 = □
7. between 11 and 8. ⟶ 11 − 8 = □

Finding the difference

1. Ann has 5 dolls.
Jane has 3 dolls.
Ann has how many
more dolls than Jane?

2. Peter has 8¢.
Mary has 12¢.
Peter has how many
cents less than Mary?

3. Tom has 11¢.
Susan has 5¢.
Tom has how many
more cents than Susan?

4. Jane is 8 years old.
Bill is 11 years old.
Jane is how many
years younger than Bill?

5. Joe's pup is 10 inches tall.
Dan's pup is 8 inches tall.
Joe's pup is how much taller than Dan's?

6. Jack's boat is 11 inches long.
Betty's boat is 7 inches long.
Betty's boat is how much shorter than Jack's?

7. 12 is how much greater than 5? $12 - 5 =$ ■

8. 7 is how much greater than 3? $7 - 3 =$ ■

9. 8 is how much less than 10? $10 - 8 =$ ■

10. 6 is how much less than 11? $11 - 6 =$ ■

11. 12 is how much greater than 4? $12 - 4 =$ ■

Problem solving

1. Ted's fish is 8 inches long. Add Subtract
Ann's fish is 5 inches long.
Whose fish is longer? How much longer?

2. A ball costs 12¢. Add Subtract
A balloon costs 5¢.
Which costs less? How much less?

3. Bill has 7¢. Add Subtract
Joe has 4¢ more than Bill.
How much money has Joe?

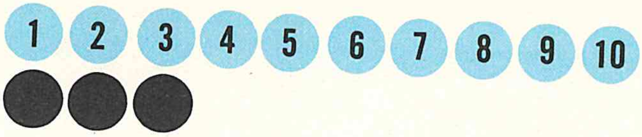
4. Dick saw 11 birds. Add Subtract
6 were blue. The others were red.
How many birds were red?

5. Betty has a dime. Add Subtract
She spends 7 cents.
How much change should she get?

6. Jane's ruler is 6 inches long. Add Subtract
Tom's ruler is 6 inches longer.
How many inches long is Tom's ruler?

Studying facts with sums of 13

1\.



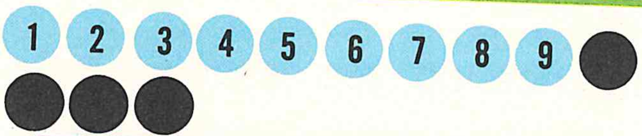
How many disks all together?

? blue disks

? black disks

10 + 3 = □

2\.



9 + 4 = (9 + 1) + 3

10 + 3 = △

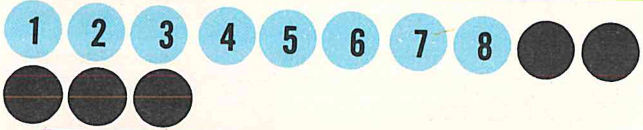
9 + 4 = □

4 + 9 = □

13 − 4 = □

13 − 9 = □

3\.



8 + 5 = (8 + 2) + 3

10 + 3 = △

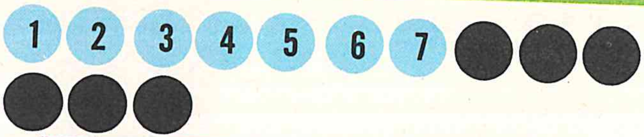
8 + 5 = □

5 + 8 = □

13 − 5 = □

13 − 8 = □

4\.



7 + 6 = (7 + 3) + 3

10 + 3 = △

7 + 6 = □

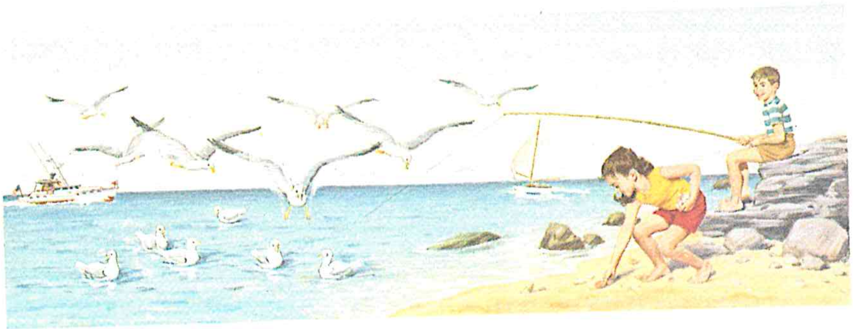
6 + 7 = □

13 − 6 = □

13 − 7 = □

$\begin{array}{r} 8 \\ +5 \\ \hline \end{array}$ $\begin{array}{r} 13 \\ -9 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ +7 \\ \hline \end{array}$ $\begin{array}{r} 13 \\ -5 \\ \hline \end{array}$ $\begin{array}{r} 13 \\ -6 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ +4 \\ \hline \end{array}$

$\begin{array}{r} 13 \\ -7 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ +8 \\ \hline \end{array}$ $\begin{array}{r} 4 \\ +9 \\ \hline \end{array}$ $\begin{array}{r} 13 \\ -8 \\ \hline \end{array}$ $\begin{array}{r} 7 \\ +6 \\ \hline \end{array}$ $\begin{array}{r} 13 \\ -4 \\ \hline \end{array}$



Using facts with sums of 13

Which number sentence do you use?

1. How many birds are flying?
   How many are on the water?
   How many birds in all?

   $13 - 6 = \triangle$
   $7 + 6 = \triangle$
   $6 + 6 = \triangle$

2. Beth found 6 pink shells,
   3 white shells, 4 brown shells.
   How many shells did she find?

   $6 + 3 + 3 = \triangle$
   $3 + 5 + 4 = \triangle$
   $6 + 3 + 4 = \triangle$

3. Beth and Bill had 13 crabs.
   Five got away.
   How many crabs were left?

   $5 + 8 = \triangle$
   $13 - 5 = \triangle$
   $13 - 8 = \triangle$

4. Bill saw 13 boats. 4 were sailboats.
   The others were motorboats.
   How many motorboats did he see?

   $4 + 9 = \triangle$
   $13 - 9 = \triangle$
   $13 - 4 = \triangle$

5. Bill caught 13 fish. Beth caught 7.
   How many more fish did
   Bill catch than Beth?

   $13 - 6 = \triangle$
   $13 - 7 = \triangle$
   $6 + 7 = \triangle$

Discovering patterns

1. What is the pattern? What comes next?

a. 5, 7, 9, 11, ?, ?, ?, ?
b. 20, 25, 30, 35, ?, ?, ?, ?
c. 60, 50, 40, ?, ?, ?, ?
d. 0, 20, 40, ?, ?, ?, ?
e. 2, 5, 8, ?, ?, ?, ?
f. 51, 49, 47, ?, ?, ?, ?

Choose whole numbers less than 10 to make these sentences true.

2.
▲ + 🟥 + ⬢ = 11
▲ + 🟥 + ⬢ = 12
▲ + 🟥 + ⬢ = 13

3.
▲ + 🟥 + ◆ + ⬢ = 11
▲ + 🟥 + ◆ + ⬢ = 12
▲ + 🟥 + ◆ + ⬢ = 13

What comes next?

4.
7 + 6 = 13
6 + 5 = 🟥
5 + 4 = 🟥
⬢ + ▲ = 🟥

5.
15 − 3 = 12
14 − 4 = 10
13 − 5 = 🟥
⬢ − ▲ = 🟥

Which numbers in the set at its right will make the sentence true?

6. (4 + 5) + 🟩 < 13 0, 1, 2, 3, 4, 5
7. (3 + 2) + 🟩 > 12 4, 5, 6, 7, 8, 9, 10

Review

1.

$$\begin{array}{r}2\\1\\+\ 6\\\hline\end{array}\qquad\begin{array}{r}4\\2\\+\ 7\\\hline\end{array}\qquad\begin{array}{r}2\\6\\+\ 3\\\hline\end{array}\qquad\begin{array}{r}4\\4\\+\ 4\\\hline\end{array}\qquad\begin{array}{r}5\\3\\+\ 5\\\hline\end{array}\qquad\begin{array}{r}4\\2\\+\ 5\\\hline\end{array}\qquad\begin{array}{r}5\\2\\+\ 5\\\hline\end{array}$$

2.

$$\begin{array}{r}60\\+\ 20\\\hline\end{array}\qquad\begin{array}{r}52\\+\ 26\\\hline\end{array}\qquad\begin{array}{r}153\\+\ 743\\\hline\end{array}\qquad\begin{array}{r}534\\+\ 463\\\hline\end{array}\qquad\begin{array}{r}325\\+\ 513\\\hline\end{array}$$

3.

$$\begin{array}{r}30\\-\ 20\\\hline\end{array}\qquad\begin{array}{r}86\\-\ 42\\\hline\end{array}\qquad\begin{array}{r}974\\-\ 342\\\hline\end{array}\qquad\begin{array}{r}789\\-\ 454\\\hline\end{array}\qquad\begin{array}{r}698\\-\ 385\\\hline\end{array}$$

4. Use >, or <, or = to make each sentence true.

9 + 4	●	10 + 3
6 + 5	●	8 + 4
7 + 5	●	3 + 8

4 + 7	●	5 + 8
4 + 8	●	5 + 6
8 + 5	●	6 + 7

What is missing?

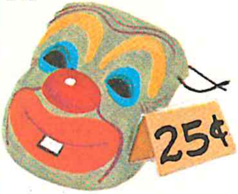
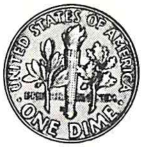
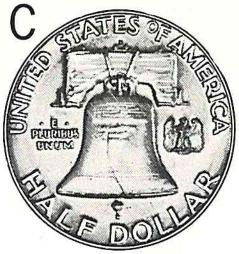
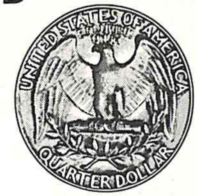
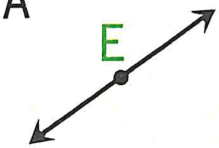
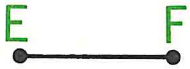
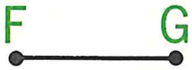
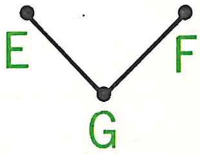
5.

$$\begin{array}{r}4\\+\ \blacksquare\\\hline 11\end{array}\qquad\begin{array}{r}6\\+\ \blacksquare\\\hline 10\end{array}\qquad\begin{array}{r}6\\+\ \blacksquare\\\hline 12\end{array}\qquad\begin{array}{r}\blacksquare\\+\ 4\\\hline 12\end{array}\qquad\begin{array}{r}\blacksquare\\+\ 5\\\hline 12\end{array}\qquad\begin{array}{r}7\\+\ \blacksquare\\\hline 13\end{array}$$

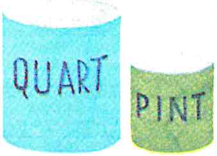
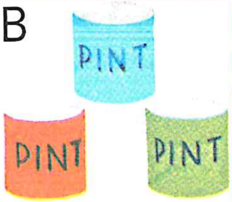
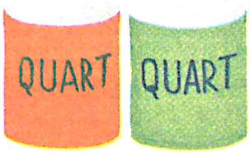
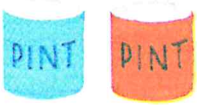
6.

$$\begin{array}{r}13\\-\ \blacksquare\\\hline 6\end{array}\qquad\begin{array}{r}\blacksquare\\-\ 4\\\hline 9\end{array}\qquad\begin{array}{r}11\\-\ \blacksquare\\\hline 3\end{array}\qquad\begin{array}{r}\blacksquare\\-\ 2\\\hline 9\end{array}\qquad\begin{array}{r}\blacksquare\\-\ 4\\\hline 8\end{array}\qquad\begin{array}{r}\blacksquare\\-\ 9\\\hline 3\end{array}$$

Test 5

1.	A 	B 	C 	D  UNITED STATES OF AMERICA E PLURIBUS UNUM QUARTER DOLLAR
2.	A 8¢	B 6¢	C 2¢	D 3¢
3.	A 5 dimes	B 100 cents	C 4 quarters	D 2 half dollars
4.	A 9 inches	B 1 foot	C 12 inches	D 13 inches
5.	A 180	B 148	C 140	D 184
6.	A 6	B 4	C 3	D 2
7.	A 	B 	C 	D 

Test 6

1.	A 8 − 2	B 8 − 6	C 2 + 8	D 2 + 6
2.	A 3 3 + 3	B 3 3 3 + 3	C 4 + 4	D 4 4 + 4
3.	A 4 + 5 = 9	B 5 − 4 = 1	C 5 + 4 = 9	D 9 − 5 = 4
4.	A 	B 	C 	D 
5.	A 310	B 301	C 303	D 30010
6.	A 10 − 4	B 10 − 6	C 6 + 4	D 6 − 4
7.	A 27¢	B 53¢	C 35¢	D 28¢

Studying sums greater than 100

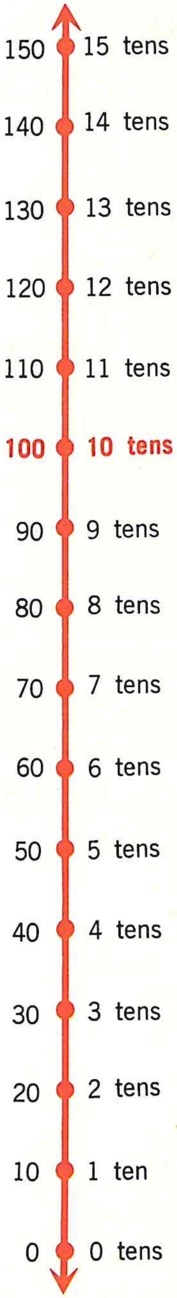
Use the number line to find the answers.

1. 8 tens + 2 tens = _?_ tens. 10 tens = 🟩

2. 8 tens + 3 tens = _?_ tens. 11 tens = 🟩

3. 8 tens + 4 tens = _?_ tens. 12 tens = 🟩

4. 8 tens + 5 tens = _?_ tens. 13 tens = 🟩



Find the sums.

5.

$$\begin{array}{rcl} 62 & = & \text{6 tens 2 ones} \\ \underline{+\ 65} & = & \underline{\text{6 tens 5 ones}} \\ & & \underline{\ ?\ }\text{ tens }\underline{\ ?\ }\text{ ones} = \underline{\ ?\ } \end{array}$$

6.

$$\begin{array}{rcl} 92 & = & \text{9 tens 2 ones} \\ \underline{+\ 23} & = & \underline{\text{2 tens 3 ones}} \\ & & \underline{\ ?\ }\text{ tens }\underline{\ ?\ }\text{ ones} = \underline{\ ?\ } \end{array}$$

7.	80 + 50	40 + 70	90 + 40	70 + 50	60 + 70
8.	42 + 86	71 + 62	25 + 92	92 + 37	33 + 72
9.	52 + 71	36 + 82	67 + 42	52 + 84	72 + 42

Using dollars and cents

100 cents make 1 dollar.

We write 1 dollar this way: $1.00

The sign $ means dollar or dollars.

The dot in $1.00 is the cents point.

1. Bob bought a truck and a plane.
Here is his bill. →

	DOLLARS	CENTS
truck		60
plane		70
TOTAL →	1	30

He paid ? cents for the truck.

He paid ? cents for the plane.

For both he paid 1 dollar and 30 cents, or $1.30.

$$\boxed{\begin{array}{r} \$\ .60 \\ .70 \\ \hline \$1.30 \end{array}}$$

How much will you pay?

2.

	DOLLARS	CENTS
game		50
truck		60
TOTAL →	?	? ?

$$\boxed{\begin{array}{r} \$\ .50 \\ .60 \\ \hline \$\,?.?\,? \end{array}}$$

3.

	DOLLARS	CENTS
ball		40
gun		80
TOTAL →	?	? ?

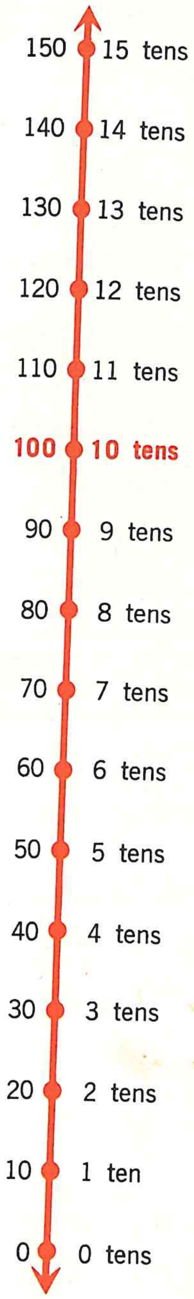
$$\boxed{\begin{array}{r} \$\ .40 \\ .80 \\ \hline \$\,?.?\,? \end{array}}$$

4.
$$\begin{array}{r} \$\ .90 \\ +\ .40 \\ \hline ■ \end{array} \qquad \begin{array}{r} \$\ .30 \\ +\ .80 \\ \hline ■ \end{array} \qquad \begin{array}{r} \$\ .70 \\ +\ .40 \\ \hline ■ \end{array} \qquad \begin{array}{r} \$\ .30 \\ +\ .90 \\ \hline ■ \end{array} \qquad \begin{array}{r} \$\ .50 \\ +\ .80 \\ \hline ■ \end{array}$$

Subtracting tens

Use the number line to find the answers.

1. 13 tens – 3 tens = $\underline{?}$ tens. 10 tens = 🟦
2. 13 tens – 4 tens = $\underline{?}$ tens. 9 tens = 🟦
3. 13 tens – 5 tens = $\underline{?}$ tens. 8 tens = 🟦
4. 13 tens – 6 tens = $\underline{?}$ tens. 7 tens = 🟦



Find the answers.

5.

$$\begin{array}{rcl} 120 & = & 12 \text{ tens } 0 \text{ ones} \\ -\ 60 & = & 6 \text{ tens } 0 \text{ ones} \\ \cline{1-1}\cline{3-3} & & \underline{?} \text{ tens } \underline{?} \text{ ones } = \underline{?} \end{array}$$

6.

$$\begin{array}{rcl} 136 & = & 13 \text{ tens } 6 \text{ ones} \\ -\ 62 & = & 6 \text{ tens } 2 \text{ ones} \\ \cline{1-1}\cline{3-3} & & \underline{?} \text{ tens } \underline{?} \text{ ones } = \underline{?} \end{array}$$

7. $\begin{array}{r} 130 \\ -\ 50 \\ \hline \end{array}$ $\begin{array}{r} 110 \\ -\ 70 \\ \hline \end{array}$ $\begin{array}{r} 130 \\ -\ 40 \\ \hline \end{array}$ $\begin{array}{r} 120 \\ -\ 50 \\ \hline \end{array}$ $\begin{array}{r} 130 \\ -\ 70 \\ \hline \end{array}$

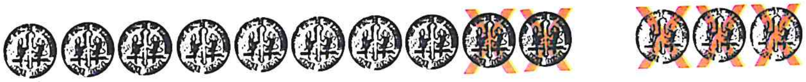
8. $\begin{array}{r} 128 \\ -\ 86 \\ \hline \end{array}$ $\begin{array}{r} 133 \\ -\ 62 \\ \hline \end{array}$ $\begin{array}{r} 117 \\ -\ 92 \\ \hline \end{array}$ $\begin{array}{r} 122 \\ -\ 31 \\ \hline \end{array}$ $\begin{array}{r} 105 \\ -\ 72 \\ \hline \end{array}$

9. $\begin{array}{r} 123 \\ -\ 71 \\ \hline \end{array}$ $\begin{array}{r} 118 \\ -\ 82 \\ \hline \end{array}$ $\begin{array}{r} 109 \\ -\ 47 \\ \hline \end{array}$ $\begin{array}{r} 136 \\ -\ 84 \\ \hline \end{array}$ $\begin{array}{r} 114 \\ -\ 42 \\ \hline \end{array}$

Using dollars and cents

1.

13 dimes is 1 dollar and _?_ cents, or \$1.30.

2. 

Take 5 dimes from 13 dimes.
How many dimes are left?

Take 50 cents from 130 cents.
How many cents are left?

$$\begin{array}{r} \$1.30 \\ -\ .50 \\ \hline \$\ \ .80 \end{array}$$

Find the answers.

3. $\begin{array}{r} \$1.30 \\ -\ .60 \\ \hline \end{array}$ $\begin{array}{r} \$1.10 \\ -\ .40 \\ \hline \end{array}$ $\begin{array}{r} \$1.30 \\ -\ .80 \\ \hline \end{array}$ $\begin{array}{r} \$1.20 \\ -\ .40 \\ \hline \end{array}$

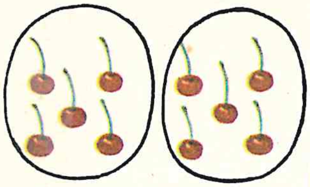
4. $\begin{array}{r} \$1.20 \\ -\ .70 \\ \hline \end{array}$ $\begin{array}{r} \$1.10 \\ -\ .10 \\ \hline \end{array}$ $\begin{array}{r} \$1.00 \\ -\ .30 \\ \hline \end{array}$ $\begin{array}{r} \$1.30 \\ -\ .50 \\ \hline \end{array}$

5. $\begin{array}{r} \$1.10 \\ -\ .50 \\ \hline \end{array}$ $\begin{array}{r} \$1.30 \\ -\ .70 \\ \hline \end{array}$ $\begin{array}{r} \$1.28 \\ -\ .62 \\ \hline \end{array}$ $\begin{array}{r} \$1.17 \\ -\ .23 \\ \hline \end{array}$

6. $\begin{array}{r} \$1.00 \\ -\ .60 \\ \hline \end{array}$ $\begin{array}{r} \$1.00 \\ -\ .80 \\ \hline \end{array}$ $\begin{array}{r} \$1.35 \\ -\ .45 \\ \hline \end{array}$ $\begin{array}{r} \$1.29 \\ -\ .86 \\ \hline \end{array}$

Studying doubles

1.

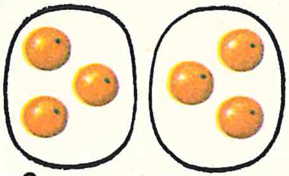


$\underline{\ ?\ }$ sets of 5

5 + 5 = 🟩

Two 5's = 🟩

2.

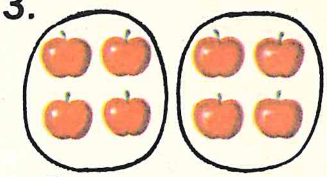


$\underline{\ ?\ }$ sets of 3

3 + 3 = 🟩

Two 3's = 🟩

3.

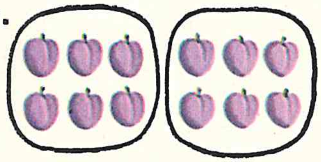


$\underline{\ ?\ }$ sets of 4

4 + 4 = 🟩

Two 4's = 🟩

4.

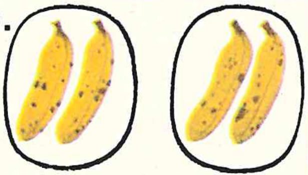


$\underline{\ ?\ }$ sets of 6

6 + 6 = 🟩

Two 6's = 🟩

5.

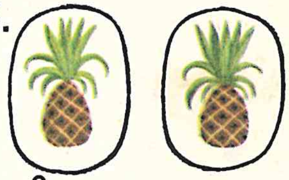


$\underline{\ ?\ }$ sets of 2

2 + 2 = 🟩

Two 2's = 🟩

6.

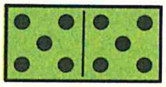


$\underline{\ ?\ }$ sets of 1

1 + 1 = 🟩

Two 1's = 🟩

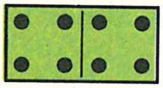
7.



Two 5's

6 8 10

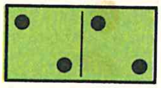
8.



Two 4's

6 8 10

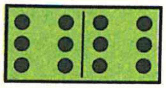
9.



Two 2's

2 4 6

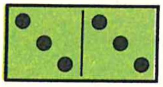
10.



Two 6's

8 10 12

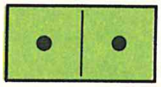
11.



Two 3's

6 8 10

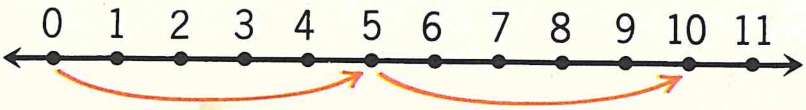
12.



Two 1's

0 2 4

13. Which does the number line show?



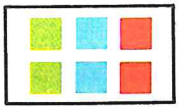
Two 4's

Two 5's

Two 6's

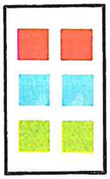
Multiplication sentences

1. How many sets of 3?



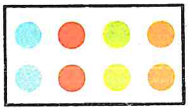
Two 3's = □
2 times 3 = □
2 × 3 = □

How many sets of 2?



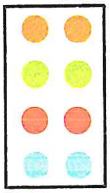
Three 2's = □
3 times 2 = □
3 × 2 = □

2. How many sets of 4?



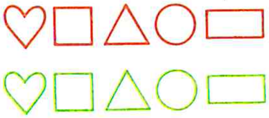
Two 4's = □
2 times 4 = □
2 × 4 = □

How many sets of 2?



Four 2's = □
4 times 2 = □
4 × 2 = □

3. How many sets of 5?

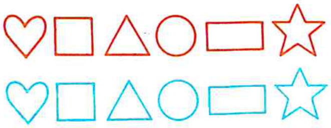


Two 5's = □
2 times 5 = □
2 × 5 = □

How many sets of 2?

Five 2's = □
5 times 2 = □
5 × 2 = □

4. How many sets of 6?



Two 6's = □
2 times 6 = □
2 × 6 = □

How many sets of 2?

Six 2's = □
6 times 2 = □
6 × 2 = □

5.

2 × 4 = □ 2 × 6 = □ 2 × 5 = □ 2 × 3 = □
4 × 2 = □ 6 × 2 = □ 5 × 2 = □ 3 × 2 = □

Using multiplication

1.

1 apple costs 5¢.
Buy 2 apples.
2 × 5 = 🟩 Pay ? ¢.

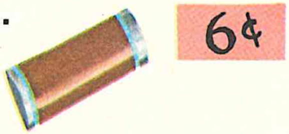
2.

1 lollipop costs 2¢.
Buy 4 lollipops.
4 × 2 = 🟩 Pay ? ¢.

Write an addition sentence and a multiplication sentence for each problem.

3.

1 costs 1¢.
Buy 2. Pay ? ¢.

4. 

1 costs 6¢.
Buy 2. Pay ? ¢.

5.

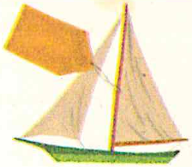
1 costs 2¢.
Buy 3. Pay ? ¢.

6.

1 costs 10¢.
Buy 2. Pay ? ¢.

7.

1 costs 60¢.
Buy 2. Pay ? ¢.

8. 

1 costs 20¢.
Buy 3. Pay ? ¢.

Make true number sentences.

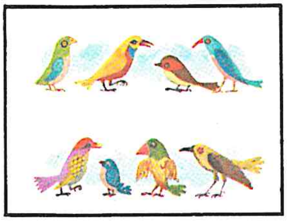
9. 30 + 30 = 🟩
2 × 30 = 🟩
30 × 2 = 🟩

10. 50 + 50 = 🟩
2 × 50 = 🟩
50 × 2 = 🟩

11. 40 + 40 = 🟩
2 × 40 = 🟩
40 × 2 = 🟩

Finding one half of a number

A

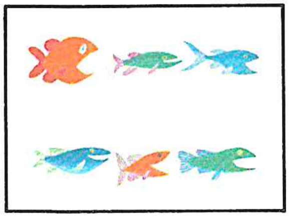


How many birds in set A?

How many sets of 4 birds each?

One half of 8 is ?. $\frac{1}{2}$ of 8 = □

B

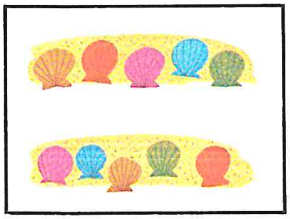


How many fish in set B?

How many sets of 3 fish each?

One half of 6 is ?. $\frac{1}{2}$ of 6 = □

C

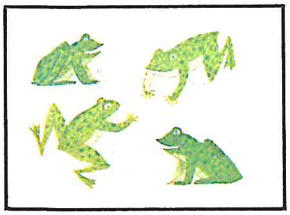


How many shells in set C?

How many sets of 5 shells each?

One half of 10 is ?. $\frac{1}{2}$ of 10 = □

D

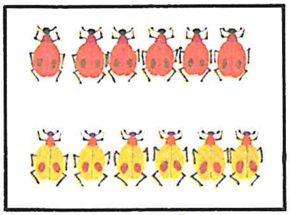


How many frogs in set D?

How many sets of 2 frogs each?

One half of 4 is ?. $\frac{1}{2}$ of 4 = □

E



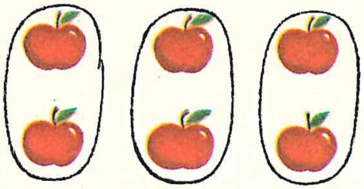
How many bugs in set E?

How many sets of 6 bugs each?

One half of 12 is ?. $\frac{1}{2}$ of 12 = □

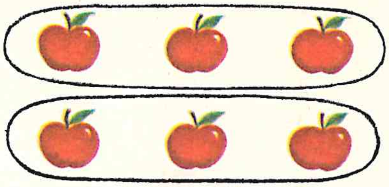
Dividing

1.



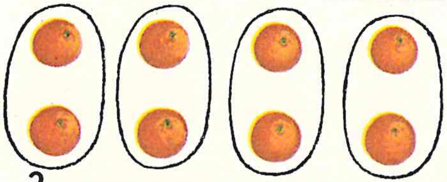
? apples in all
? sets of 2 apples
? 2's in 6

2.



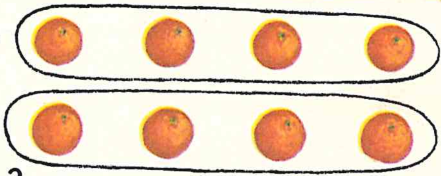
? apples in all
? sets of 3 apples
? 3's in 6

3.



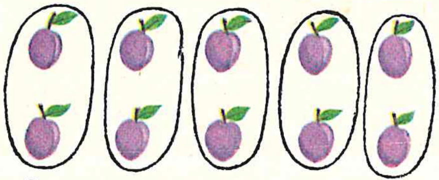
? oranges in all
? sets of 2 oranges
? 2's in 8

4.



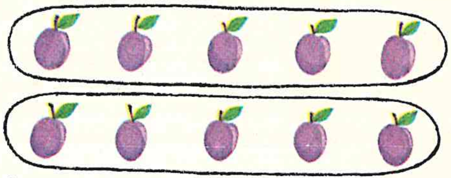
? oranges in all
? sets of 4 oranges
? 4's in 8

5.



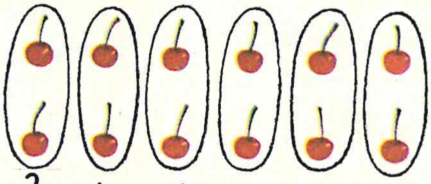
? plums in all
? sets of 2 plums
? 2's in 10

6.



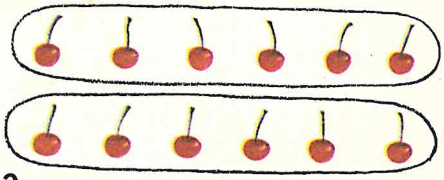
? plums in all
? sets of 5 plums
? 5's in 10

7.



? cherries in all
? sets of 2 cherries
? 2's in 12

8.



? cherries in all
? sets of 6 cherries
? 6's in 12

Review

Copy and write the answers.

1. $2 \times 5 =$ ■
$5 \times 2 =$ ■
$2 \times 50 =$ ■
$50 \times 2 =$ ■

2. $2 \times 6 =$ ■
$6 \times 2 =$ ■
$2 \times 60 =$ ■
$60 \times 2 =$ ■

3. $2 \times 4 =$ ■
$4 \times 2 =$ ■
$2 \times 40 =$ ■
$40 \times 2 =$ ■

4. $30 + 30 =$ ■
$\frac{1}{2}$ of $60 =$ ■

5. $40 + 40 =$ ■
$\frac{1}{2}$ of $80 =$ ■

6. $50 + 50 =$ ■
$\frac{1}{2}$ of $100 =$ ■

Copy and write the answers. Look for + and − .

7.
$$\begin{array}{r} 6 \\ +\,7 \\ \hline \end{array} \quad \begin{array}{r} 3 \\ +\,8 \\ \hline \end{array} \quad \begin{array}{r} 12 \\ -\,6 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ +\,5 \\ \hline \end{array} \quad \begin{array}{r} 4 \\ +\,9 \\ \hline \end{array} \quad \begin{array}{r} 9 \\ +\,3 \\ \hline \end{array} \quad \begin{array}{r} 12 \\ -\,7 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 13 \\ -\,9 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ +\,6 \\ \hline \end{array} \quad \begin{array}{r} 12 \\ -\,5 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ -\,4 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ -\,8 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ +\,5 \\ \hline \end{array} \quad \begin{array}{r} 9 \\ +\,4 \\ \hline \end{array}$$

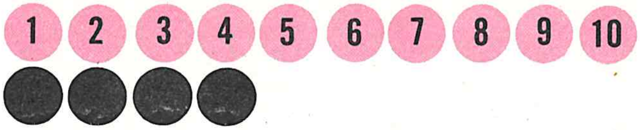
9.
$$\begin{array}{r} 8 \\ +\,3 \\ \hline \end{array} \quad \begin{array}{r} 5 \\ +\,7 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ -\,7 \\ \hline \end{array} \quad \begin{array}{r} 12 \\ -\,3 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ -\,5 \\ \hline \end{array} \quad \begin{array}{r} 4 \\ +\,8 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ -\,6 \\ \hline \end{array}$$

10. Ken had \$1.50. He earned \$.25. How much money had he then?

11. Susan paid \$.75 for a book. She paid \$.40 for a game. How much did she spend?

Studying facts with sums of 14

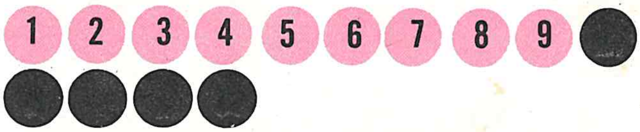
1.



How many disks all together?

? pink disks
? black disks
10 + 4 = □

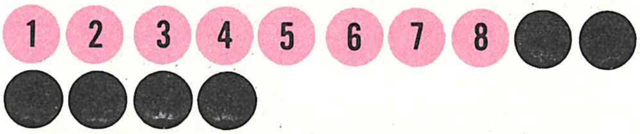
2.



9 + 5 = (9 + 1) + 4
10 + 4 = △

9 + 5 = □
5 + 9 = □
14 − 5 = □
14 − 9 = □

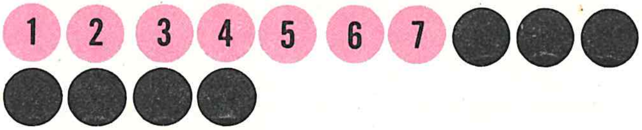
3.



8 + 6 = (8 + 2) + 4
10 + 4 = △

8 + 6 = □
6 + 8 = □
14 − 6 = □
14 − 8 = □

4.

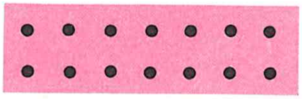


7 + 7 = (7 + 3) + 4
10 + 4 = △

7 + 7 = □

14 − 7 = □

5.



7 + 7 = □

Two 7's equals □
2 times 7 equals □
□ 7's in 14

7 × 2 = □
2 × 7 = □
$\frac{1}{2}$ of 14 = □

Using facts with sums of 14

1. 14 marbles in a bag

Take out 5; ? are left.
Take out ?; 8 are left.

Take out ?; 7 are left.
Take out 14; ? are left.

2. 7 + 7 = ■
9 + 5 = ■
8 + 6 = ■

3. 7 + ■ = 14
9 + ■ = 14
8 + ■ = 14

4. ■ + 6 = 14
■ + 5 = 14
■ + 9 = 14

5. 14 = 9 + 1 + ■
14 = 8 + 1 + ■
14 = 7 + 2 + ■
14 = 6 + 2 + ■

6. 8 + 6 = 10 + ■
5 + 9 = 10 + ■
7 + 7 = 10 + ■
6 + 8 = 10 + ■

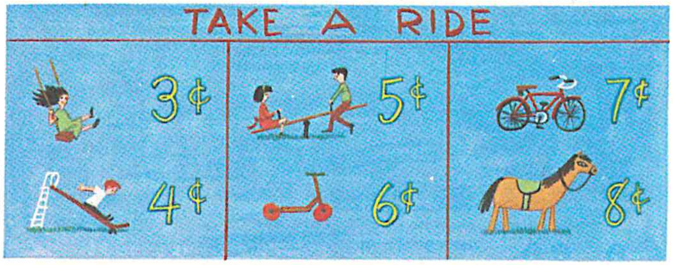
7. 5 + 8 + ■ = 14
4 + 9 + ■ = 14
6 + 7 + ■ = 14
6 + 6 + ■ = 14

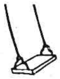
Use > or < to make each sentence true.

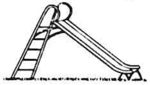
8. 8 + 6 ● 15
9 + 4 ● 15
½ of 14 ● 6
½ of 12 ● 4

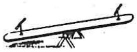
9. 9 + 5 ● 13
6 + 7 ● 14
2 × 7 ● 12
6 × 2 ● 14

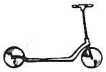
Finding total costs

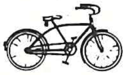


1. 2 rides on the  ? ¢

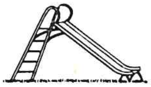
2. 2 rides on the  ? ¢

3. 2 rides on the  ? ¢

4. 2 rides on the  ? ¢

5. 2 rides on the  ? ¢

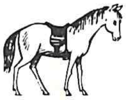
6. ride → 5¢
ride → 6¢
ride → 3¢
Pay ? ¢

7. ride → 3¢
ride → 6¢
 ride → 4¢
Pay ? ¢

8. Have → 14¢
Ride 5¢
Have left ? ¢

9. Have → 13¢
Ride 7¢
Have left ? ¢

10. Have → 12¢
Ride 5¢
Have left ? ¢

11. Have → 14¢
Ride  8¢
Have left ? ¢

Problem solving

1. Ruth has 5¢.
Bill has 12¢.
Who has more?
How much more?

2. Tom had 11 apples.
He gave some away.
He has 4 left. He
gave away $\underline{?}$ apples.

3. Ted has 6 fish. Joe
has 8 fish. Together
they have $\underline{?}$ fish.

4. John buys an 8-cent
toy. He gives a dime.
His change is $\underline{?}$¢.

5. Jane had 14 flowers.
She gave away 5.
How many are left?

6. 12 children are in the
pool. 8 are boys.
How many are girls?

7. Jack wants a 10-cent
toy. He has 4¢. He
must get $\underline{?}$¢ more.

8. Nancy is 5 years old.
Jack is 8 years older.
Jack is $\underline{?}$ years old.

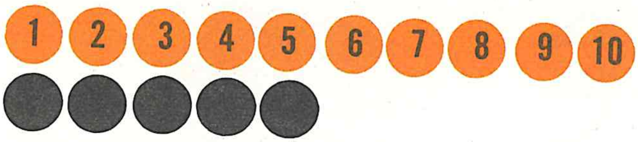
9. John bought six 2-cent
nails. He paid $\underline{?}$¢.

10. Tom paid $\underline{?}$¢ for
three 20-cent pens.

11. Think of adding 0 to each member of set A.
What will be the set of sums? Why?

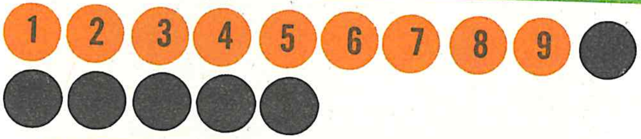
A 3, 6, 1, 8, 2, 5, 0, 4, 9, 7

Studying facts with sums of 15

1. 

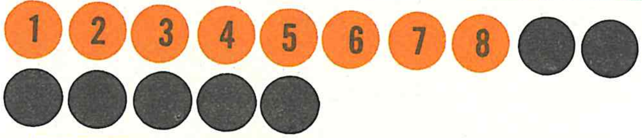
How many disks all together?

? orange disks
? black disks
10 + 5 = 🟩

2. 

$9 + 6 = (9 + 1) + 5$
$10 \quad + 5 = \triangle$

9 + 6 = 🟩
6 + 9 = 🟩
15 − 6 = 🟩
15 − 9 = 🟩

3. 

$8 + 7 = (8 + 2) + 5$
$10 \quad + 5 = \triangle$

8 + 7 = 🟩
7 + 8 = 🟩
15 − 7 = 🟩
15 − 8 = 🟩

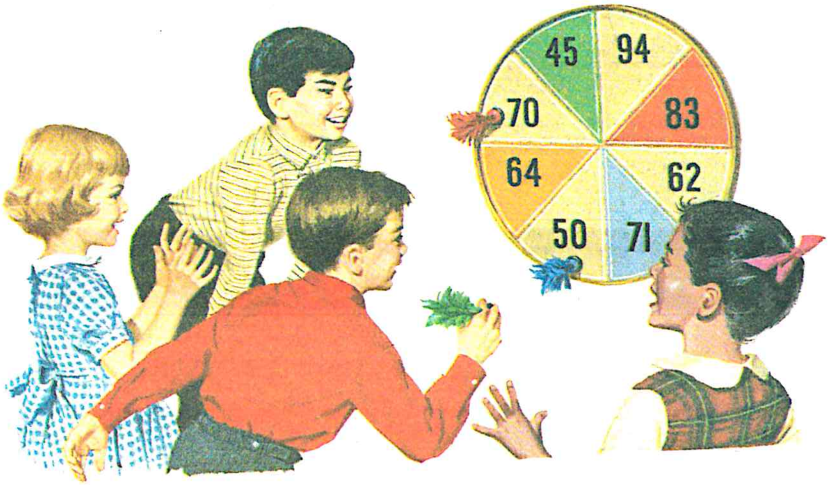
4.

9 + 6 = 15, so 6 + 9 = 🟩
15 − 8 = 7, so 15 − 7 = 🟩
7 + 7 = 14, so 7 + 8 = 🟩
14 − 9 = 5, so 15 − 9 = 🟩

5.

$$\begin{array}{r}15\\-\ 9\\\hline\square\end{array}\qquad\begin{array}{r}7\\+\ 8\\\hline\square\end{array}\qquad\begin{array}{r}15\\-\ 6\\\hline\square\end{array}\qquad\begin{array}{r}15\\-\ 7\\\hline\square\end{array}\qquad\begin{array}{r}6\\+\ 9\\\hline\square\end{array}\qquad\begin{array}{r}15\\-\ 8\\\hline\square\end{array}$$

Finding total scores



1. Each child had two throws. Find the scores.

Bill	71 + 83	Sue	71 + 70	Scott	94 + 45
Jane	83 + 64	Tim	64 + 71	Fred	50 + 94
Ann	94 + 64	Dick	62 + 64	Peter	83 + 50

2. List the scores in order from the highest to the lowest.
3. High score wins in this game. Who won?
   Who had the lowest score?
   Whose score is in the middle of the list?

Problem solving

1. John bought 12 chicks.
He sold 3.
He has ? chicks left.

2. Peter had 15 pennies.
He lost 6¢.
He has ? ¢ left.

3. Dick had 9¢.
Then he earned 6¢.
Now he has ? ¢.

4. Joe had 12 toy cars.
He broke 4. How
many had he then?

5. Sue wants to send 11
cards. She has 7 cards.
She must get ? more.

6. Bill had 7 toy planes.
He made 8 more. How
many had he then?

7. 14 children gave a
circus. 6 were boys.
? children were girls.

8. Mary bought 2 kites.
They cost 5¢ each.
How much did she pay?

9. Tom has 7¢.
Jack has a dime.
Jack has ? ¢ more
than Tom.

10. Ann baked 8 brown
and 6 white cookies.
How many cookies did
she bake?

Review

Choose the correct answer.

1. Which day comes just after Friday?

   Saturday Thursday Wednesday

2. Which month comes just before April?

   February May March

3. Which will buy as much as a dollar buys?

   50 cents 10 dimes 10 nickels

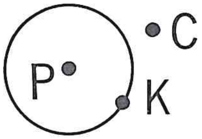
4. How many oranges are there in one half dozen?

   6 8 5

5. How many quarts of milk make a gallon of milk?

   3 2 4

6. Which point is at the center of the circle?



   K P C

---

7. 6 + 1 + 7 = □ 4 + 2 + 5 = □ 3 + 2 + 8 = □

2 + 4 + 6 = □ 4 + 4 + 7 = □ 2 + 6 + 4 = □

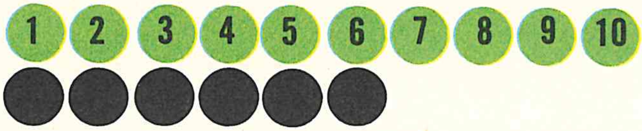
---

8. Copy and write the answers. Look for + and −.

9	15	14	6	13	8	4
+ 5	− 6	− 8	+ 9	− 8	+ 6	+ 9

Studying facts with sums of 16

1.



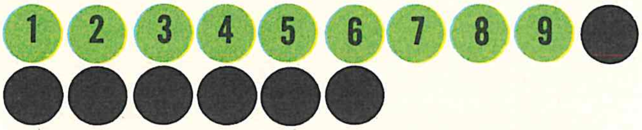
How many disks all together?

_?_ green disks

_?_ black disks

10 + 6 = □

2.



$$\begin{aligned} 9 + 7 &= (9 + 1) + 6 \\ &= \quad 10 \quad + 6 = \triangle \end{aligned}$$

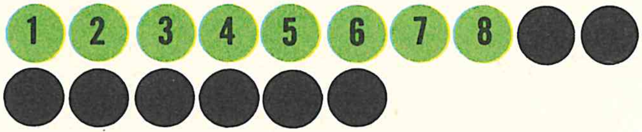
9 + 7 = □

7 + 9 = □

16 − 7 = □

16 − 9 = □

3.



$$\begin{aligned} 8 + 8 &= (8 + 2) + 6 \\ &= \quad 10 \quad + 6 = \triangle \end{aligned}$$

8 + 8 = □

16 − 8 = □

4.

8 + 7 = 15, so 9 + 7 = □

7 + 9 = 16, so 9 + 7 = □

8 + 8 = 16, so 2 × 8 = □

8 + 8 = 16, so $\frac{1}{2}$ of 16 = □

5.

$$\begin{array}{r} 9 \\ +\,7 \\ \hline \end{array} \qquad \begin{array}{r} 16 \\ -\,9 \\ \hline \end{array} \qquad \begin{array}{r} 8 \\ +\,8 \\ \hline \end{array} \qquad \begin{array}{r} 16 \\ -\,7 \\ \hline \end{array} \qquad \begin{array}{r} 7 \\ +\,9 \\ \hline \end{array} \qquad \begin{array}{r} 16 \\ -\,8 \\ \hline \end{array}$$

Using facts with sums of 16

1. In a rodeo there are 16 cowboys and 9 cowgirls. How many more boys than girls are there?

$$\begin{array}{r} 9 \\ +\ 7 \\ \hline \end{array} \qquad \begin{array}{r} 7 \\ +\ 9 \\ \hline \end{array} \qquad \begin{array}{r} 16 \\ -\ 9 \\ \hline \end{array}$$

2. Jim saw 15 buffaloes. 8 of them had horns. How many did not have horns?

$$\begin{array}{r} 15 \\ -\ 8 \\ \hline \end{array} \qquad \begin{array}{r} 8 \\ +\ 7 \\ \hline \end{array} \qquad \begin{array}{r} 8 \\ -\ 7 \\ \hline \end{array}$$

3. A cowboy has 16 horses. 7 are white. The others are black. How many are black?

$$\begin{array}{r} 9 \\ +\ 7 \\ \hline \end{array} \qquad \begin{array}{r} 16 \\ -\ 7 \\ \hline \end{array} \qquad \begin{array}{r} 9 \\ -\ 7 \\ \hline \end{array}$$

4. 16 ponies ran away. Jim found 8. Tom found the others. How many ponies did Tom find?

$$\begin{array}{r} 8 \\ -\ 8 \\ \hline \end{array} \qquad \begin{array}{r} 8 \\ +\ 8 \\ \hline \end{array} \qquad \begin{array}{r} 16 \\ -\ 8 \\ \hline \end{array}$$

5. Roy paid $8 for boots. He paid $7 for a hat. How much did Roy spend?

$$\begin{array}{r} 8 \\ +\ 7 \\ \hline \end{array} \qquad \begin{array}{r} 8 \\ -\ 7 \\ \hline \end{array} \qquad \begin{array}{r} 15 \\ -\ 8 \\ \hline \end{array}$$

6. A cowboy rounded up 4 brown ponies, 3 black ponies, 6 white ponies. How many ponies did he round up?

$$\begin{array}{r} 4 \\ 3 \\ +\ 4 \\ \hline \end{array} \qquad \begin{array}{r} 4 \\ 3 \\ +\ 6 \\ \hline \end{array} \qquad \begin{array}{r} 6 \\ 4 \\ +\ 6 \\ \hline \end{array}$$

Practice with number sentence families

What sentence is missing in each family?

1. $80 + 70 = \blacktriangle$
$70 + 80 = \blacktriangle$
$150 - 70 = \blacktriangle$

2. $60 + 80 = \blacktriangle$
$140 - 80 = \blacktriangle$
$140 - 60 = \blacktriangle$

3. $70 + 60 = \blacktriangle$
$60 + 70 = \blacktriangle$
$130 - 70 = \blacktriangle$

4. $80 + 40 = \blacktriangle$
$40 + 80 = \blacktriangle$
$120 - 80 = \blacktriangle$

5. $90 + 40 = \blacktriangle$
$130 - 90 = \blacktriangle$
$130 - 40 = \blacktriangle$

6. $90 + 60 = \blacktriangle$
$60 + 90 = \blacktriangle$
$150 - 90 = \blacktriangle$

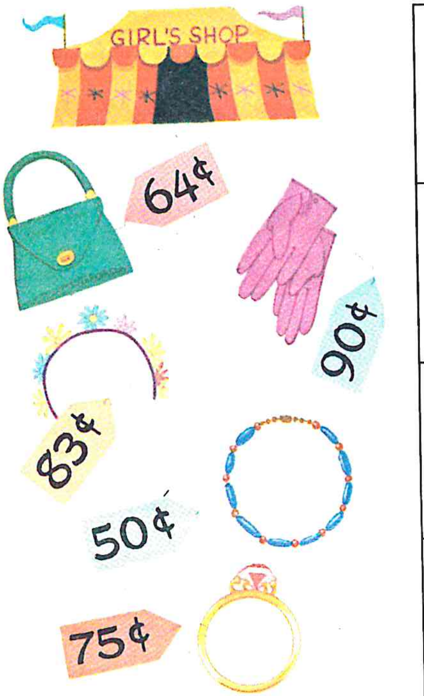
7. $70 + 50 = \blacktriangle$
$50 + 70 = \blacktriangle$
$120 - 70 = \blacktriangle$

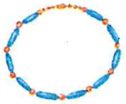
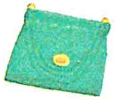
8. $50 + 90 = \blacktriangle$
$140 - 90 = \blacktriangle$
$140 - 50 = \blacktriangle$

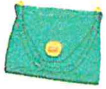
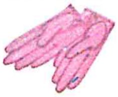
9. $90 + 70 = \blacktriangle$
$160 - 90 = \blacktriangle$
$160 - 70 = \blacktriangle$

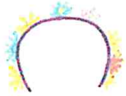
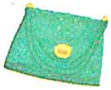
10. $80 + 50 = \blacktriangle$
$130 - 80 = \blacktriangle$
$130 - 50 = \blacktriangle$

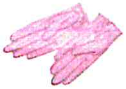
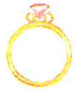
Solving problems about shopping

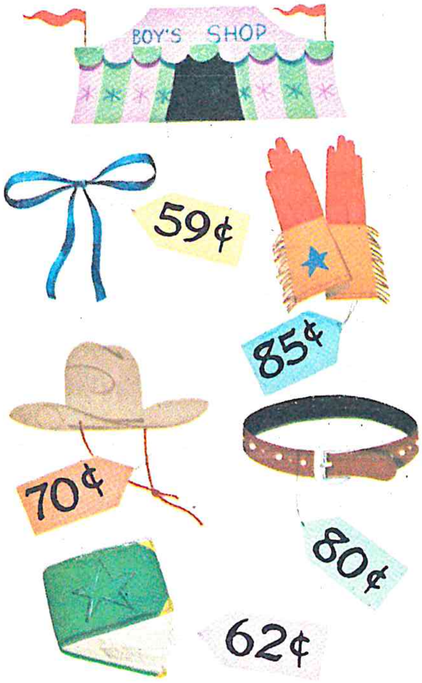


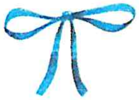
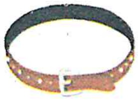
1. A  and a 
Cost: 114¢, or $1.14

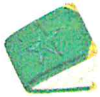
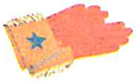
2. A  and a 
Cost ? ¢, or $?

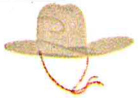
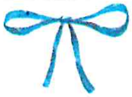
3. A  and a 
Cost ? ¢, or $?

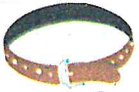
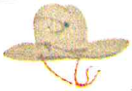
4. A  and a 
Cost ? ¢, or $?



1. A  and a 
Cost: 139¢, or $1.39

2. A  and a 
Cost ? ¢, or $?

3. A  and a 
Cost ? ¢, or $?

4. A  and a 
Cost ? ¢, or $?

Studying facts with sums of 17

1.

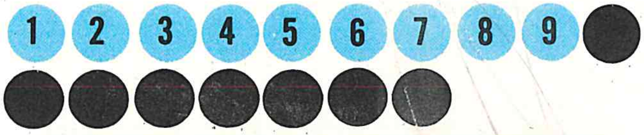
How many disks all together?

? blue disks

? black disks

10 + 7 = 🟥

2.



9 + 8 = (9 + 1) + 7
10 + 7 = 🔺

9 + 8 = 🟥
8 + 9 = 🟥
17 − 8 = 🟥
17 − 9 = 🟥

3.

8 + 8 = 16, so 8 + 9 = 🟥
10 + 8 = 18, so 9 + 8 = 🟥
16 − 8 = 8, so 17 − 8 = 🟥
9 + 8 = 17, so 8 + 9 = 🟥
17 − 8 = 9, so 17 − 9 = 🟥
8 + 9 = 17, so 9 + 8 = 🟥

---

4. $\begin{array}{r} 16 \\ -\ 9 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ +\ 8 \\ \hline \end{array}$ $\begin{array}{r} 7 \\ +\ 9 \\ \hline \end{array}$ $\begin{array}{r} 16 \\ -\ 8 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ +\ 6 \\ \hline \end{array}$ $\begin{array}{r} 14 \\ -\ 7 \\ \hline \end{array}$

---

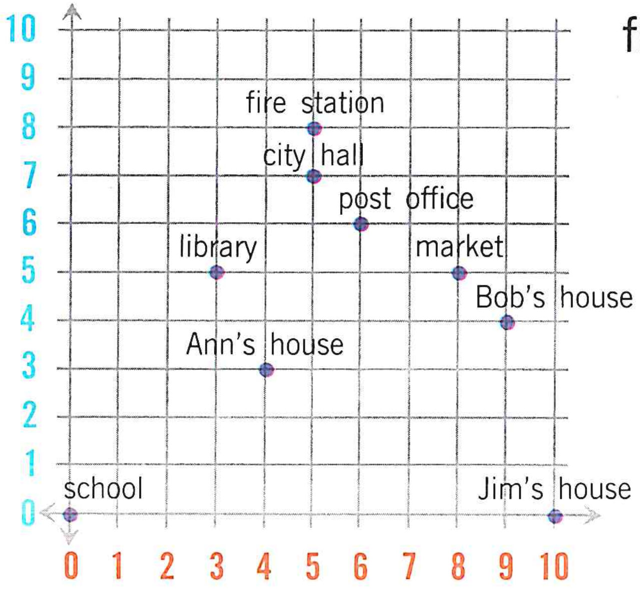
5. $\begin{array}{r} 8 \\ +\ 9 \\ \hline \end{array}$ $\begin{array}{r} 15 \\ -\ 9 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ +\ 8 \\ \hline \end{array}$ $\begin{array}{r} 17 \\ -\ 8 \\ \hline \end{array}$ $\begin{array}{r} 7 \\ +\ 7 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ +\ 9 \\ \hline \end{array}$

---

6. $\begin{array}{r} 16 \\ -\ 7 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ +\ 7 \\ \hline \end{array}$ $\begin{array}{r} 15 \\ -\ 6 \\ \hline \end{array}$ $\begin{array}{r} 17 \\ -\ 9 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ +\ 7 \\ \hline \end{array}$ $\begin{array}{r} 15 \\ -\ 8 \\ \hline \end{array}$

Number pairs

1. The school is at point 0,0. How many blocks is it from the school to



a. the library?
b. Ann's house?
c. the city hall?
d. the fire station?
e. the post office?
f. the market?
g. Bob's house?
h. Jim's house?

Which number pairs will make each sentence true?

2. 10 − △ = □ 7,3 3,6 4,6 7,4 2,8
3. △ + □ = 14 7,4 6,8 5,9 6,9 7,7
4. △ + □ = 15 7,8 5,9 9,6 7,9 6,9
5. △ + □ = 17 8,7 9,8 7,9 10,7 8,9
6. 17 − △ = □ 8,9 7,10 7,8 9,8 7,9
7. △ + □ = 11 8,4 3,8 5,6 6,6 4,7
8. 16 − △ = □ 9,7 8,8 6,9 10,6 8,9

Thinking about numbers

Use =, <, or >.
Make true sentences.

1.

$30 + 65 \bullet 90$

$20 + 37 \bullet 50$

$40 + 45 \bullet 90$

$30 + 30 \bullet 60$

2.

$40 + 26 \bullet 60$

$60 + 23 \bullet 90$

$70 + 37 \bullet 100$

$30 + 42 \bullet 70$

3.

$33 + 50 \bullet 80$

$28 + 40 \bullet 70$

$63 + 30 \bullet 100$

$52 + 10 \bullet 60$

What numbers will make these sentences true?

4.

$8 + 9 = (8 + 2) + \square$

$8 + 7 = (8 + 2) + \square$

$9 + 9 = (9 + 1) + \square$

$7 + 6 = (7 + 3) + \square$

5.

$30 + 54 = (30 + 50) + \square$

$50 + 15 = (50 + 10) + \square$

$70 + 82 = (70 + 80) + \square$

$60 + 73 = (60 + 70) + \square$

6.

$40 + 55 = (40 + 50) + \square$

$43 + 30 = (40 + 30) + \square$

$30 + 57 = (30 + 50) + \square$

$44 + 20 = (40 + 20) + \square$

Making number sentences true

What numbers will make these sentences true?

1.

$70 + 80 = \square$

$40 + \square = 130$

$\square + 60 = 120$

$90 + \square = 120$

2.

$140 - 70 = \square$

$160 - \square = 80$

$\square - 50 = 70$

$\square - 40 = 30$

3.

$72 + 50 = \square$

$65 + \square = 135$

$\square + 28 = 98$

$\square + 43 = 43$

4.

$139 - 70 = \square$

$152 - \square = 52$

$\square - 62 = 80$

$\square - 35 = 100$

5.

$90 + 45 = \square$

$75 + \square = 80$

$\square + 5 = 69$

$\square + 43 = 47$

6.

$154 - 54 = \square$

$520 - \square = 420$

$\square - 100 = 250$

$\square - 200 = 700$

7.

$400 + 250 = \square$

$375 + \square = 475$

$\square + 190 = 300$

$\square + 500 = 550$

8.

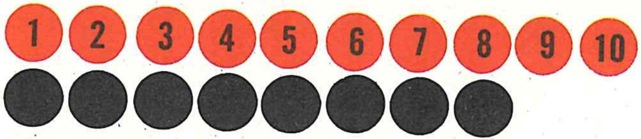
$600 - 300 = \square$

$600 - 310 = \square$

$600 - 320 = \square$

$600 - 330 = \square$

Studying facts with sums of 18

1. 

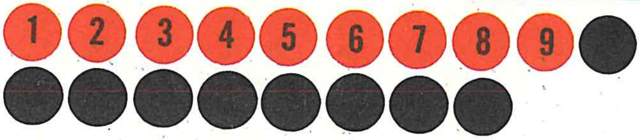
How many disks all together?

? red disks

? black disks

$10 + 8 = \square$

---

2. 

$9 + 9 = (9 + 1) + 8$

$10 \quad + 8 = \triangle$

$9 + 9 = \square$

$18 - 9 = \square$

3.

$10 + 9 = 19$, so $9 + 9 = \triangle$

$18 - 9 = 9$, so $9 + 9 = \triangle$

$8 + 9 = 17$, so $9 + 9 = \triangle$

$17 - 9 = 8$, so $18 - 9 = \triangle$

4.

$2 \times 9 = \square$

$\frac{1}{2}$ of $18 = \square$

5.

$$\begin{array}{r}9\\+9\\\hline\end{array}\qquad\begin{array}{r}17\\-9\\\hline\end{array}\qquad\begin{array}{r}16\\-8\\\hline\end{array}\qquad\begin{array}{r}8\\+9\\\hline\end{array}\qquad\begin{array}{r}16\\-7\\\hline\end{array}\qquad\begin{array}{r}7\\+9\\\hline\end{array}$$

6.

$$\begin{array}{r}15\\-6\\\hline\end{array}\qquad\begin{array}{r}16\\-9\\\hline\end{array}\qquad\begin{array}{r}9\\+7\\\hline\end{array}\qquad\begin{array}{r}8\\+8\\\hline\end{array}\qquad\begin{array}{r}18\\-9\\\hline\end{array}\qquad\begin{array}{r}6\\+9\\\hline\end{array}$$

7.

$$\begin{array}{r}5\\4\\+\blacksquare\\\hline 18\end{array}\qquad\begin{array}{r}6\\\blacksquare\\+9\\\hline 18\end{array}\qquad\begin{array}{r}\blacksquare\\2\\+7\\\hline 18\end{array}\qquad\begin{array}{r}9\\0\\+\blacksquare\\\hline 18\end{array}\qquad\begin{array}{r}3\\6\\+\blacksquare\\\hline 18\end{array}\qquad\begin{array}{r}\blacksquare\\4\\+5\\\hline 18\end{array}$$

Basic addition facts

A. Add 1 to: 6; 4; 8; 2; 5; 9; 1; 7; 3.

Add 0 to: 6; 4; 8; 2; 5; 9; 1; 7; 3.

B.	2	4	5	2	6	3	4	2
	+ 2	+ 3	+ 2	+ 3	+ 6	+ 4	+ 2	+ 5
	5	2	3	6	3	4	2	5
	+ 5	+ 6	+ 3	+ 2	+ 2	+ 4	+ 4	+ 3

C.	2	8	7	7	3	7	8	4
	+ 7	+ 2	+ 7	+ 2	+ 5	+ 3	+ 8	+ 5
	6	2	6	5	9	3	4	3
	+ 4	+ 8	+ 3	+ 4	+ 9	+ 6	+ 6	+ 7

D.	9	6	5	9	3	7	8	4
	+ 2	+ 5	+ 7	+ 4	+ 8	+ 5	+ 3	+ 8
	7	9	2	8	4	4	3	5
	+ 4	+ 3	+ 9	+ 4	+ 9	+ 7	+ 9	+ 6

E.	8	6	7	8	5	8	5	9
	+ 5	+ 9	+ 6	+ 7	+ 9	+ 6	+ 8	+ 7
	8	9	6	7	9	7	9	6
	+ 9	+ 5	+ 7	+ 9	+ 6	+ 8	+ 8	+ 8

Basic subtraction facts

A. Subtract 1 from: 7; 5; 9; 3; 6; 2; 8; 1.

Subtract 0 from: 7; 5; 9; 3; 6; 2; 8; 1.

B.

$$\begin{array}{rrrr|rrrr} 4 & 7 & 7 & 5 & 12 & 7 & 6 & 7 \\ \underline{-\ 2} & \underline{-\ 4} & \underline{-\ 5} & \underline{-\ 2} & \underline{-\ 6} & \underline{-\ 3} & \underline{-\ 4} & \underline{-\ 2} \\ \\ 10 & 8 & 6 & 8 & 5 & 8 & 6 & 8 \\ \underline{-\ 5} & \underline{-\ 2} & \underline{-\ 3} & \underline{-\ 6} & \underline{-\ 3} & \underline{-\ 4} & \underline{-\ 2} & \underline{-\ 5} \end{array}$$

C.

$$\begin{array}{rrrr|rrrr} 9 & 10 & 14 & 9 & 8 & 10 & 16 & 9 \\ \underline{-\ 2} & \underline{-\ 8} & \underline{-\ 7} & \underline{-\ 7} & \underline{-\ 3} & \underline{-\ 7} & \underline{-\ 8} & \underline{-\ 4} \\ \\ 10 & 10 & 9 & 9 & 18 & 9 & 10 & 10 \\ \underline{-\ 6} & \underline{-\ 2} & \underline{-\ 6} & \underline{-\ 5} & \underline{-\ 9} & \underline{-\ 3} & \underline{-\ 4} & \underline{-\ 3} \end{array}$$

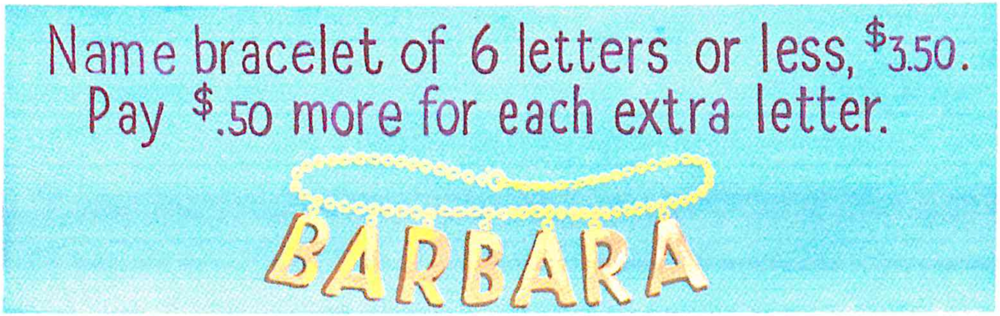
D.

$$\begin{array}{rrrr|rrrr} 11 & 11 & 12 & 13 & 11 & 12 & 11 & 12 \\ \underline{-\ 9} & \underline{-\ 6} & \underline{-\ 5} & \underline{-\ 9} & \underline{-\ 3} & \underline{-\ 7} & \underline{-\ 8} & \underline{-\ 4} \\ \\ 11 & 12 & 11 & 12 & 13 & 11 & 12 & 11 \\ \underline{-\ 4} & \underline{-\ 9} & \underline{-\ 2} & \underline{-\ 8} & \underline{-\ 4} & \underline{-\ 4} & \underline{-\ 3} & \underline{-\ 5} \end{array}$$

E.

$$\begin{array}{rrrr|rrrr} 13 & 15 & 13 & 15 & 14 & 14 & 13 & 16 \\ \underline{-\ 8} & \underline{-\ 6} & \underline{-\ 7} & \underline{-\ 8} & \underline{-\ 5} & \underline{-\ 8} & \underline{-\ 5} & \underline{-\ 9} \\ \\ 17 & 14 & 13 & 16 & 15 & 15 & 17 & 14 \\ \underline{-\ 8} & \underline{-\ 9} & \underline{-\ 6} & \underline{-\ 7} & \underline{-\ 9} & \underline{-\ 7} & \underline{-\ 9} & \underline{-\ 6} \end{array}$$

Finding the cost



Name bracelet of 6 letters or less, $3.50.
Pay $.50 more for each extra letter.

How many letters in Barbara's bracelet?
6 letters cost $3.50.
One extra letter costs $.50.
Barbara's bracelet will cost __?__.

DOLLARS	CENTS
3	50
	50
4	00

How much will each girl's bracelet cost?

1. Martha
2. Mildred
3. Charlotte
4. Mary Lu
5. Margaret
6. Patricia
7. Rose Marie
8. Betsy
9. Elizabeth

---

10. Jim has 8 quarters, 3 dimes, 2 nickels, and 2 pennies. How much money has he?

---

11. Bob is buying a plane kit for $.75 and paste for $.15. How much change should he get from a dollar bill?

---

12. Find the cost of three 50-cent pens.

Discovering patterns

1. 8 + 9 = 🟩
18 + 9 = 🟩
28 + 9 = 🟩
38 + 9 = 🟩
48 + 9 = 🟩

2. 9 + 7 = 🟩
19 + 7 = 🟩
29 + 7 = 🟩
39 + 7 = 🟩
49 + 7 = 🟩

3. 9 + 6 = 🟩
19 + 6 = 🟩
29 + 6 = 🟩
39 + 6 = 🟩
49 + 6 = 🟩

4. 12 + 10 = 🟩
22 + 10 = 🟩
32 + 10 = 🟩
42 + 10 = 🟩
52 + 10 = 🟩

5. 14 + 20 = 🟩
24 + 20 = 🟩
34 + 20 = 🟩
44 + 20 = 🟩
54 + 20 = 🟩

6. 18 + 30 = 🟩
28 + 30 = 🟩
38 + 30 = 🟩
48 + 30 = 🟩
58 + 30 = 🟩

7. 10 − 7 = ▲
20 − 7 = ▲
30 − 7 = ▲
40 − 7 = ▲
50 − 7 = ▲

8. 10 − 8 = ▲
20 − 8 = ▲
30 − 8 = ▲
40 − 8 = ▲
50 − 8 = ▲

9. 10 − 9 = ▲
20 − 9 = ▲
30 − 9 = ▲
40 − 9 = ▲
50 − 9 = ▲

10. 17 − 8 = ▲
27 − 8 = ▲
37 − 8 = ▲
47 − 8 = ▲
57 − 8 = ▲

11. 16 − 7 = ▲
26 − 7 = ▲
36 − 7 = ▲
46 − 7 = ▲
56 − 7 = ▲

12. 15 − 8 = ▲
25 − 8 = ▲
35 − 8 = ▲
45 − 8 = ▲
55 − 8 = ▲

Review of addition

1.	20 + 50	78 + 20	20 + 29	62 + 23	21 + 42	23 + 73
2.	34 + 45	65 + 32	31 + 53	14 + 13	34 + 64	45 + 23
3.	30 + 80	76 + 50	60 + 71	63 + 42	51 + 86	82 + 71
4.	94 + 93	75 + 94	92 + 86	81 + 68	85 + 82	63 + 95
5.	120 + 420	429 + 230	705 + 243	637 + 200	232 + 35	
6.	316 + 273	253 + 641	124 + 574	423 + 146	341 + 51	

Which do you choose? Why?

CAKES $\frac{1}{2}$ dozen or 5	1 quarter or 2 dimes	ICE CREAM 1 pint or 1 quart	CANDY BAR one whole or one half
CANDIES 14 or 41	a half dollar or 60c	APPLE $\frac{1}{4}$ or $\frac{1}{2}$	COOKIES 24 or 1 dozen

Using a table

	Monday	Tuesday	Wednesday	Thursday	Friday	Totals
Joe	2	0	5	1	0	?
Bill	3	2	0	0	4	?
Sally	1	4	8	3	2	?
Doris	7	6	0	4	2	?
Scott	0	1	5	3	2	?
Totals	?	?	?	?	?	?

1. How many flowers did each child bring?

Joe Bill
Sally Doris
Scott

2. How many flowers were brought each day?

Monday Tuesday
Wednesday Thursday
Friday

3. Who brought most flowers? fewest flowers?

4. On which day was the greatest number of flowers brought? the least number?

5. How many flowers were brought in all?

Review of subtraction

1.

$$\begin{array}{rrrrrr} 70 & 98 & 49 & 85 & 63 & 69 \\ -\ 50 & -\ 20 & -\ 29 & -\ 23 & -\ 42 & -\ 37 \\ \hline \end{array}$$

2.

$$\begin{array}{rrrrrr} 79 & 97 & 84 & 27 & 89 & 68 \\ -\ 34 & -\ 32 & -\ 31 & -\ 13 & -\ 64 & -\ 23 \\ \hline \end{array}$$

3.

$$\begin{array}{rrrrr} 110 & 126 & 115 & 105 & 127 \\ -\ \ 30 & -\ \ 76 & -\ \ 50 & -\ \ 62 & -\ \ 86 \\ \hline \end{array}$$

4.

$$\begin{array}{rrrrr} 153 & 187 & 178 & 169 & 149 \\ -\ \ 81 & -\ \ 94 & -\ \ 92 & -\ \ 76 & -\ \ 81 \\ \hline \end{array}$$

5.

$$\begin{array}{rrrrr} 167 & 158 & 139 & 146 & 127 \\ -\ \ 85 & -\ \ 63 & -\ \ 74 & -\ \ 93 & -\ \ 35 \\ \hline \end{array}$$

6.

$$\begin{array}{rrrrr} 540 & 659 & 948 & 837 & 267 \\ -\ 420 & -\ 230 & -\ 245 & -\ 200 & -\ \ 35 \\ \hline \end{array}$$

7.

$$\begin{array}{rrrrr} 589 & 894 & 698 & 569 & 392 \\ -\ 273 & -\ 641 & -\ 574 & -\ 146 & -\ \ 51 \\ \hline \end{array}$$

Can you do it?

7	?	15
?	8	10
9	16	?

?	5	13
9	?	?
17	9	26

Making number sentences true

Use >, <, or = to make each sentence true.

1.

9 + 7	●	10 + 6
6 + 7 + 1	●	5 + 5 + 3
7 + 8	●	20 − 6

2.

20 + 12	●	30 + 2
40 − 1	●	30 + 8
60 + 8	●	70 − 3

3.

40 + 13	●	50 + 3
60 − 4	●	50 + 5
70 − 2	●	60 − 7

4.

20 + 7	●	30 − 5
2 × 9	●	20 − 2
3 + 4 + 5	●	3 + 5 + 6

5.

20+30+9	●	50 + 9
82 − 2	●	70 + 10
30 + 30	●	$\frac{1}{2}$ of 60

6.

9 + 7 + 1	●	18
13 − 6	●	13 − 3 − 3
$\frac{1}{2}$ of 40	●	21

7.

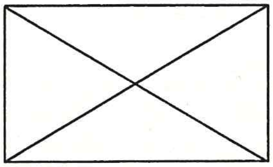
40 − 2	●	30 + 8
2 × 5	●	5 × 2
20 + 30	●	25 + 26

8.

60 + 5	●	50+10+ 5
50 + 25	●	80 − 5
$\frac{1}{2}$ of 40	●	10 + 10

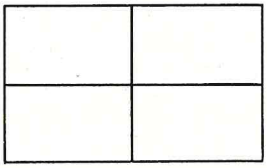
9. How many different triangles can you find?

A



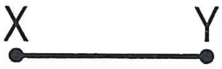
10. How many different rectangles can you find?

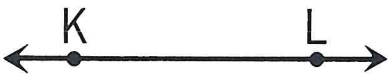
B

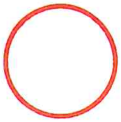


Review

1. How many days in a week?
2. How many months in a year?
3. A quarter is worth how many cents?
4. How many pennies can you get for a dollar?
5. 16 dimes are worth a dollar and ___?___ dimes.
6. How many is one half dozen?
7. Which measurement is greater?
   a. 20 inches or 2 feet   b. 2 pints or 2 quarts
8. When the thermometer changes from 72° to 60°, is the day getting warmer or cooler?
9. Which picture shows a rectangle? a circle? a triangle? a line? a line segment?





A


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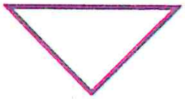
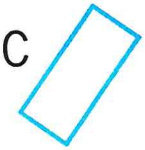
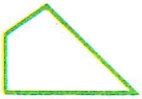
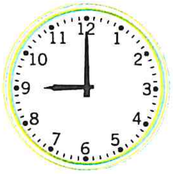
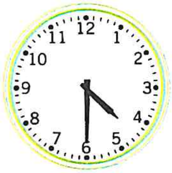


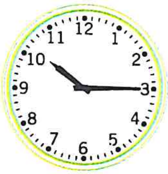
C


D


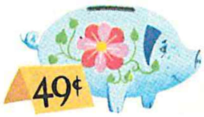
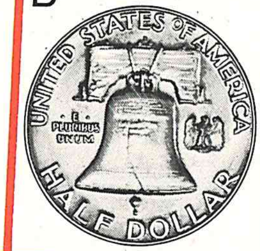
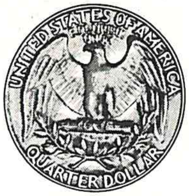
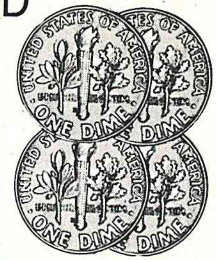
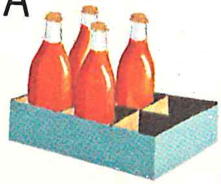
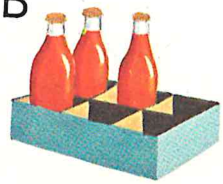
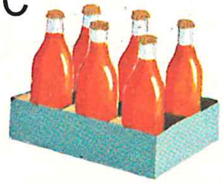
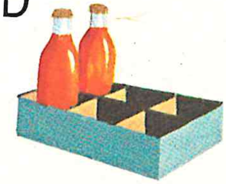
10. What time does each clock show?



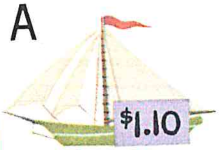
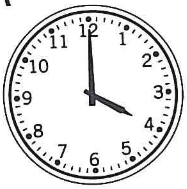
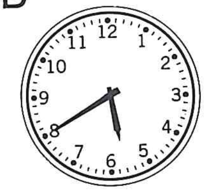
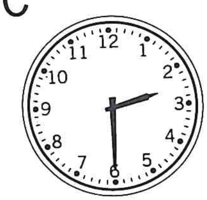
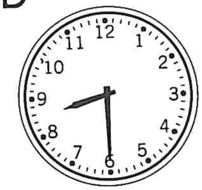




Test 7

1.	A  	B  	C  	D 
2.	A 18	B 14	C 13	D 15
3.	A 8	B 9	C 7	D 6
4.	A 1 inch	B 1 foot	C 2 feet	D 4 inches
5.	A $\begin{array}{r} 28 \\ +\ 31 \\ \hline 59 \end{array}$	B $\begin{array}{r} 59 \\ -\ 31 \\ \hline 28 \end{array}$	C $\begin{array}{r} 59 \\ -\ 28 \\ \hline 31 \end{array}$	D $\begin{array}{r} 59 \\ +\ 31 \\ \hline 90 \end{array}$
6.	A $8+9=\square$	B $17-8=\square$	C $9+8=\square$	D $17-9=\square$
7.	A 	B 	C 	D 

Test 8

1.	A 	B 101¢	C $1.01	D 110¢
2.	A 25 inches	B 1 foot 2 inches	C 2 feet	D 1 foot 5 inches
3.	A 17	B 177	C 170	D 710
4.	A $2 \times 5 = \underline{?}$	B $2 + 5 = \underline{?}$	C $5 - 2 = \underline{?}$	D $5 - 5 = \underline{?}$
5.	A $2 > \frac{1}{2}$	B $60+31<90$	C $20+70=90$	D $117 < 171$
6.	A $8 + 2 + 5 = \underline{?}$	B $8 + 2 + 2 = \underline{?}$	C $8 + (2 \times 5) = \underline{?}$	D $(2 \times 8) + 5 = \underline{?}$
7.	A 	B 	C 	D 

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A 6
B 7
C 8
D 9
E 0
F 1
G 2
H 3
I 4
J 5

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